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17 **UNITED STATES DISTRICT COURT
NORTHERN DISTRICT OF CALIFORNIA
SAN JOSE DIVISION**

18 AFFILIOUS, INC., a California corporation,
19 JESSYCA FREDERICK, NJ PREMIER INC., a New
20 Jersey corporation, TIMOTHY MILLS, MARK
21 YOUNG, DANNY COLLINS, JOSHUA JEON, 406
22 PROPERTY SERVICES, PLLC, a Montana
23 professional limited liability company, MARK
24 BERNEY, and MARQUISHA CORK on behalf of
25 themselves and all others similarly situated,
26 Plaintiffs,

27 v.
28

FACEBOOK, INC., a Delaware corporation,
Defendant.

Case No.: _____
CLASS ACTION COMPLAINT
DEMAND FOR JURY TRIAL

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1 Plaintiffs allege the following on behalf of themselves and others similarly situated based on the
 2 review of public documents and information.¹

3 **INTRODUCTION**

4 1. This Complaint is brought on behalf of people and companies—including each of the
 5 named Plaintiffs—who bought advertising from Facebook at anticompetitively inflated prices. Over the
 6 course of the past decade, Facebook devised, executed, and reaped the benefits of a scheme to unlawfully
 7 monopolize the market for social advertising. As a direct result, Facebook was able to (and in fact, did)
 8 charge supracompetitive prices for social advertisements to thousands of people and businesses, including
 9 Plaintiffs Affilius, Inc., Jessyca Frederick, NJ Premier Inc., Timothy Mills, Mark Young, Danny Collins,
 10 Joshua Jeon, 406 Property Services, PLLC, Mark Berney, and MarQuisha Cork.

11 2. The nature, and indeed, fact of the anticompetitive overcharge levied by Facebook on the
 12 Plaintiffs and others similarly situated was not known until very recently—because Mark Zuckerberg and
 13 his lieutenants throughout Facebook specifically worked to keep their anticompetitive scheme under
 14 wraps. But recent revelations—including publicly-revealed internal Facebook communications and
 15 documents—make indisputably clear that Facebook intentionally and unlawfully monopolized the social
 16 advertising market; charged supracompetitive prices to Plaintiffs and other Facebook advertisers; lied
 17 about it to Plaintiffs, developers, regulators, the press, and the public; and reaped billions of dollars in
 18 inflated social advertising revenues in the process.

19 3. Facebook acquired the power to raise prices through the anticompetitive scheme described
 20 below, and did so year after year with no competitive check.

21 * * *

22
 23 ¹ All references to internal Facebook documents are exclusively to those published by news
 24 organizations and other public sources, particularly NBC News. As of the date of this complaint, NBC's
 25 documents were available at <https://dataviz.nbcnews.com/projects/20191104-facebook-leaked-documents/assets/facebook-sealed-exhibits.pdf>; and <https://dataviz.nbcnews.com/projects/20191104-facebook-leaked-documents/assets/facebook-exhibits.pdf>.

1 4. By the end of 2010, after Facebook had emerged the victor among social networks such
 2 as MySpace and Friendster, Facebook faced a new threat from smartphones. Mobile applications (“apps”)
 3 on smartphones for the first time allowed users to access the Internet from any location, on user interfaces
 4 controlled by touch, providing a distinct experience from desktop or laptop computers. Special-purpose
 5 apps designed specifically for smartphones and smartphone web browsers could not only access the
 6 Internet, but also users’ address books—a ready-made, proto-social network from which apps could draw.

7 5. The rise of smartphones immediately threatened Facebook’s advertising business, which
 8 had plateaued as Facebook rapidly approached its initial public offering in 2012. It was clear that the
 9 digital future was moving toward mobile platforms, and Facebook’s mobile product was substandard.
 10 Indeed, most of the advertising market would soon be designed for mobile platforms, and Facebook was
 11 likely to be left out. Mobile apps also threatened user engagement on Facebook’s core product (a desktop
 12 web app), and reduced engagement would in turn reduce the demand for Facebook’s targeted social
 13 advertising. Facebook faced a vicious negative feedback loop that could destroy its business.

14 6. That is when, according to internal Facebook documents, Facebook’s founder and CEO,
 15 Mark Zuckerberg, as well as Facebook’s most senior executives, hatched and executed a plan to
 16 (a) neutralize any potential competition from tens of thousands of mobile and mobile-friendly apps built
 17 using Facebook’s own platform (called “Platform”), (b) conscript apps on its Platform to bootstrap
 18 through large advertising purchases Facebook’s fledgling NEKO mobile advertising product with
 19 restrictive tying agreements, and (c) acquire, kill, or clone competitors that could rival Facebook as a
 20 source of social user data, which would in turn threaten Facebook as a preeminent and unopposed
 21 platform for social advertising.

22 7. Facebook executed its scheme with the help of spyware created by a company it ultimately
 23 acquired, Onavo, which—by deceiving millions of mobile users into believing they were downloading
 24 apps with utility (such as a virtual private network app)—provided Facebook with real-time surveillance
 25 of its competitive threats. This real-time surveillance apparatus allowed Facebook to identify mobile app
 26 developers from which to demand advertising purchases or data sharing agreements. It also allowed
 27 Facebook to identify rapidly growing threats to its core social networking product—such as Instagram

1 and WhatsApp, which Facebook acquired, and Snap, which Facebook failed to acquire and instead
 2 cloned.

3 8. From 2012 through 2015, Facebook quietly executed its scheme. Its senior lieutenants
 4 cataloged and bucketed third-party apps on its Platform according to whether they were aligned with
 5 Facebook's business, were competitive or potentially competitive with Facebook, or were to be
 6 destroyed. During this same period, Facebook's senior-most engineers—many acting under protest—
 7 prepared to gut Facebook's Platform of its most important functionality.

8 9. The functionality Facebook would remove from its Platform went to the heart of the
 9 Platform itself—the application programming interfaces relied on by apps to traverse Facebook's network
 10 of user connections and to access user timelines and/or news feeds (the "Core APIs").

11 10. Facebook decided to deceptively announce the scuttling of its own Platform at its "F8"
 12 conference held on April 30, 2014. That is, out of concerns that the announcement would cause vocal
 13 protests among developers whose business would be destroyed by the move, Facebook planned to bury
 14 the announcement under a broader announcement about its Facebook Login product. Internally,
 15 Facebook's senior executives and engineers referred to this plan to bury the change as the "switcharoo
 16 plan."

17 11. On April 30, 2014, at F8 2014, Facebook, as planned, misleadingly folded in the
 18 announcement that the Core APIs would be removed with its announcements surrounding Facebook's
 19 Login product. The alleged premise of the conference and of the Login product changes was to allow
 20 users more control over their data. Facebook did not even mention the APIs it was withdrawing at the
 21 conference, quietly announcing the deprecation of the Core APIs in a change log, and falsely stating in
 22 an FAQ that Facebook would be removing "rarely used" APIs.

23 12. On April 30, 2015, one year after its deceptive FAQ, Facebook ejected 40,000 apps from
 24 its Platform by breaking them. At and around that time, Facebook communicated more pretext
 25 surrounding its decision, systematically lying to developers and telling them that Facebook's API
 26 decisions were driven by user privacy and the need to curb privacy abuses. Internally, however,
 27 Facebook's most senior executives had called those reasons "False" and "pablum."

1 13. While Facebook systematically lied to developers and the public about its Platform
 2 change, it quietly forced deals with targeted app developers on its Platform. These chosen developers
 3 could continue to use particular Core APIs (which Facebook told others were “going away” for everyone),
 4 so long as they entered into agreements with Facebook to (a) purchase large amounts of mobile
 5 advertising from Facebook, or (b) feed back their own users’ data to Facebook. The agreements between
 6 Facebook and these developers were anticompetitive on their face.

7 14. Destroying or conscripting apps on its own Platform was not the only thing Facebook did
 8 as part of this scheme. Facebook also acquired, killed, or cloned companies that its deceptive spyware,
 9 Onavo, had identified as having rapidly obtained user engagement and large user bases. Most notably,
 10 Facebook acquired Instagram and WhatsApp to prevent these products from emerging as sources of data
 11 and user engagement that could fuel a rival social advertising platform. And when Snap rejected
 12 Zuckerberg’s \$3 billion acquisition offer, Facebook cloned Snap’s product with precision.

13 15. Over the course of several years beginning in approximately 2010-2011, the net effect of
 14 Facebook’s Platform changes, its unlawful agreements with app developers, its Onavo spyware, and its
 15 unlawful mergers and acquisitions was that Facebook (a) coerced massive advertising purchases from
 16 developers; (b) captured and exercised control over data that could otherwise fuel a rival social
 17 advertising platform through whitelist and data sharing agreements; (c) destroyed rivals not beholden to
 18 Facebook to prevent them from emerging as competing advertising platforms or sources of social data;
 19 and (d) destroyed apps that threatened user engagement with Facebook’s core product, and thereby
 20 Facebook’s social advertising products.

21 16. Facebook rapidly became the only source for highly valuable advertising that could
 22 precisely target networks of users in a social network. Facebook used this market power to repeatedly
 23 raise advertising prices every year since it began its scheme. Over the course of nearly a decade, Facebook
 24 has faced no meaningful competitive check on social advertising prices—and it has extracted
 25 supracompetitive revenues from advertisers like Plaintiffs throughout this period.

26 17. Plaintiffs are advertisers on Facebook’s advertising platform that were injured by paying
 27 supracompetitive prices for social advertising. Indeed, the prices they paid would have been lower if
 28

1 Facebook had not unlawfully monopolized the Social Advertising Market, as those prices would have
 2 been subject to competitive forces that would otherwise exist as a check on Facebook's market power
 3 and monopoly.

4 18. Facebook managed to hide its anticompetitive scheme through (a) a code of secrecy in the
 5 face of a duty to speak truthfully and fully about its Platform, (b) affirmative false and pretextual
 6 statements to developers about the reasons for its decision to destroy its own developer ecosystem, and
 7 (c) false and misleading statements to regulators that approved Facebook's acquisitions of WhatsApp and
 8 Instagram. Facebook's ruse largely succeeded until internal documents, which were seized by the UK
 9 Parliament in 2018, were published in full by NBC News and other news organizations in November
 10 2019.

11 PARTIES

12 I. PLAINTIFFS

13 19. Plaintiff Affilius, Inc. ("Affilius") is a California corporation with its principal place of
 14 business in La Quinta, California. Affilius is an internet publisher firm that operates several websites,
 15 including WineClubReviews.net. In 2016 and 2017, Affilius purchased advertising on Facebook's self-
 16 service advertising platform to promote WineClubReviews.net. Until no earlier than November 6, 2019,
 17 Affilius did not know, and could not reasonably have known, the truth about Facebook's anticompetitive
 18 conduct, including its purpose and intent to engage in anticompetitive conduct, nor could it have known
 19 that it had been injured by paying supracompetitive prices for advertising.

20 20. Plaintiff Jessyca Frederick is a citizen of the State of California. Frederick was the sole
 21 proprietor of ClubsAndGifts.com, a promotional website. In or about 2014, Frederick d/b/a
 22 ClubsAndGifts.com purchased advertising on Facebook's self-service advertising platform to promote
 23 ClubsAndGifts.com. Until no earlier than November 6, 2019, Frederick did not know, and could not
 24 reasonably have known, the truth about Facebook's anticompetitive conduct, including its purpose and
 25 intent to engage in anticompetitive conduct, nor could she have known that she had been injured by
 26 paying supracompetitive prices for advertising.

1 21. Plaintiff NJ Premier Inc. (“NJ Premier”) is a New Jersey corporation with its principal
 2 place of business in Bergenfield, New Jersey. NJ Premier operates or has operated various businesses,
 3 including a car service, an auction service, and juice sales. From in or about 2013 through 2020, NJ
 4 Premier purchased advertising on Facebook’s self-service advertising platform to promote its business.
 5 Until no earlier than November 6, 2019, NJ Premier did not know, and could not reasonably have known,
 6 the truth about Facebook’s anticompetitive conduct, including its purpose and intent to engage in
 7 anticompetitive conduct, nor could it have known that it had been injured by paying supracompetitive
 8 prices for advertising.

9 22. Plaintiff Timothy Mills is a citizen of the State of California. Mills is the sole proprietor
 10 of Oneway Entertainment (“Oneway”), an event promoter that operates in the San Diego metropolitan
 11 area. In or about 2015, Mills d/b/a Oneway purchased advertising on Facebook’s self-service advertising
 12 platform to publicize an event. Until no earlier than November 6, 2019, Mills did not know, and could
 13 not reasonably have known, the truth about Facebook’s anticompetitive conduct, including its purpose
 14 and intent to engage in anticompetitive conduct, nor could he have known that he had been injured by
 15 paying supracompetitive prices for advertising.

16 23. Plaintiff Mark Young is a citizen of the State of New York. Young is the sole proprietor
 17 of Dinkum Hair, a hair salon located in Buchanan, New York. In or about 2016, Young d/b/a Dinkum
 18 Hair purchased advertising on Facebook’s self-service advertising platform to promote the business. Until
 19 no earlier than November 6, 2019, Young did not know, and could not reasonably have known, the truth
 20 about Facebook’s anticompetitive conduct, including its purpose and intent to engage in anticompetitive
 21 conduct, nor could he have known that he had been injured by paying supracompetitive prices for
 22 advertising.

23 24. Plaintiff Danny Collins is a citizen of the State of Illinois. He was the sole proprietor of
 24 AboveBeyondToday, an affiliate marketing business. In or about 2017, Collins d/b/a
 25 AboveBeyondToday purchased advertising on Facebook’s self-service advertising platform to promote
 26 a merchant with which he was affiliated. Until no earlier than November 6, 2019, Collins did not know,
 27 and could not reasonably have known, the truth about Facebook’s anticompetitive conduct, including its

1 purpose and intent to engage in anticompetitive conduct, nor could he have known that he had been
 2 injured by paying supracompetitive prices for advertising.

3 25. Plaintiff Joshua Jeon is a citizen of the State of Texas. He is a pastor at Dwell Church in
 4 Austin, Texas. In or about 2016, Jeon purchased advertising on Facebook's self-service advertising
 5 platform to promote Dwell Church. Jeon did not receive reimbursement from Dwell Church for the
 6 purchase. Until no earlier than November 6, 2019, Jeon did not know, and could not reasonably have
 7 known, the truth about Facebook's anticompetitive conduct, including its purpose and intent to engage in
 8 anticompetitive conduct, nor could he have known that he had been injured by paying supracompetitive
 9 prices for advertising.

10 26. Plaintiff 406 Property Services, PLLC ("406 Property Services") is a Montana
 11 professional limited liability company with its principal place of business in Whitefish, Montana. 406
 12 Property Services is a real estate property services company. From in or about 2016 into 2018, 406
 13 Property Services purchased advertising on Facebook's self-service advertising platform to promote its
 14 business. Until no earlier than November 6, 2019, 406 Property Services did not know, and could not
 15 reasonably have known, the truth about Facebook's anticompetitive conduct, including its purpose and
 16 intent to engage in anticompetitive conduct, nor could it have known that it had been injured by paying
 17 supracompetitive prices for advertising.

18 27. Plaintiff Mark Berney is a citizen of the State of Montana. From in or about 2016 into
 19 2018, Berney purchased advertising on Facebook's self-service advertising platform to promote his
 20 personal musical work. Until no earlier than November 6, 2019, Berney did not know, and could not
 21 reasonably have known, the truth about Facebook's anticompetitive conduct, including its purpose and
 22 intent to engage in anticompetitive conduct, nor could he have known that he had been injured by paying
 23 supracompetitive prices for advertising.

24 28. Plaintiff MarQuisha Cork is a citizen of the State of Texas. Cork is the sole proprietor of
 25 Qteezys Boutique, a beauty supply store located in or around Odessa, Texas. In at least 2018 and 2019,
 26 Cork d/b/a Qteezys Boutique purchased advertising on Facebook's self-service advertising platform to
 27 promote the business. Until no earlier than November 6, 2019, Cork did not know, and could not

1 reasonably have known, the truth about Facebook's anticompetitive conduct, including its purpose and
 2 intent to engage in anticompetitive conduct, nor could she have known that she had been injured by
 3 paying supracompetitive prices for advertising.

4 29. Plaintiffs all paid prices for advertising that were higher than they would have been absent
 5 Facebook's anticompetitive conduct and unlawfully acquired and/or maintained monopoly. Facebook
 6 caused Plaintiffs to pay supracompetitive prices for advertising as a result of the market power it obtained
 7 and/or maintained as a result of the anticompetitive scheme described in this Complaint.

8 II. DEFENDANT

9 30. Defendant Facebook, Inc. ("Facebook") is a publicly traded company, incorporated in
 10 Delaware. Facebook's principal place of business and headquarters is located at 1601 Willow Road in
 11 Menlo Park, California.

12 31. Founded in 2004 by Mark Zuckerberg, Facebook is a social media company that provides
 13 online services to billions of users around the world. In exchange for providing services, Facebook
 14 collects user data, which it uses to create and sell targeted advertising services. Facebook's principal
 15 revenue is from targeted social media advertising that it provides to advertisers as a data broker.

16 32. Facebook also operates as a platform for third-party applications and hardware, and owns
 17 and operates several business divisions:

- 18 • *Facebook*. Facebook's core application, which bears the company's name, is, according to
 19 Facebook's filing with shareholders, designed to enable "people to connect, share, discover,
 20 and communicate with each other on mobile devices and personal computers." The
 21 Facebook core product contains a "News Feed" that displays an algorithmically ranked
 22 series of stories and advertisements individualized for each person.
- 23 • *Instagram*. Instagram is a photo-sharing application that allows users to share photos,
 24 videos, and messages on mobile devices. Instagram was acquired in April 2012 and at
 25 present, Facebook operates Instagram as a separate application from its core Facebook
 26 product.

- *Messenger*. Facebook's Messenger application is a multimedia messaging application, allowing messages that include photos and videos to be sent from person to person across platforms and devices.
- *WhatsApp*. WhatsApp is a secure messaging application used by individuals and businesses. WhatsApp was acquired by Facebook in 2014 for \$21.8 billion, and at the time had approximately 450 million users worldwide.
- *Oculus*. Oculus is Facebook's virtual reality hardware line of business, which Facebook acquired in March 2014 for approximately \$2 billion.

33. Facebook's revenue as of year-end 2019 was \$70.70 billion (up 27% from the previous year), with net income from operations of \$23.99 billion. Almost all of this revenue came from advertising, particularly mobile advertising. As of year-end 2019, Facebook maintained \$54.86 billion in cash and cash-equivalent securities. Facebook employed 44,942 people around the world at the end of 2019 (up 26% from the previous year).

34. For the 2019 fiscal year, Facebook reported to investors that on average it had 1.66 billion daily active users of Facebook and Messenger (“DAUs”) (up 9% from the previous year) and 2.50 billion monthly active users (“MAUs”) (up 8% from the previous year). Facebook also reported that on average it had 2.26 billion daily active people (“DAP”) who used any Facebook product (up 11% from the previous year) and 2.89 billion monthly active people (“MAP”) (up 9% from the previous year).

JURISDICTION AND VENUE

35. This action arises under Section 2 of the Sherman Antitrust Act (15 U.S.C. § 2) and Sections 4 and 16 of the Clayton Act (15 U.S.C. §§ 15, 26). The action seeks to recover treble damages, interest, costs of suit, equitable relief, and reasonable attorneys' fees for damages to Plaintiffs and members of the Classes resulting from Defendant's restraints of trade and monopolization of the Social Advertising Market described herein.

36. This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 (federal question), 1332 (class action diversity jurisdiction), and 1337(a) (antitrust); and under 15 U.S.C. § 15 (antitrust).

37. Venue is appropriate in this district under 15 U.S.C. § 15(a) (Clayton Act), 15 U.S.C. § 22 (nationwide venue for antitrust matters), and 28 U.S.C. § 1391(b) (general venue provision). Facebook transacts business within this district, and it transacts its affairs and carries out interstate trade and commerce, in substantial part, in this district.

38. The Court has personal jurisdiction over Facebook as it is subject to general jurisdiction in the State of California, where it maintains its headquarters and its principal place of business. The scheme, conspiracy, and monopolization alleged in this Complaint was targeted at individuals throughout the United States, causing injury to persons in the United States, including in this district.

INTRADISTRICT ASSIGNMENT

39. This action is properly assigned to the San Jose Division of this District, pursuant to Civil Local Rule 3-2(c) and (e), because Facebook is headquartered in San Mateo County (which is served by the San Jose Division), and a substantial part of the events or omissions that give rise to the claims occurred there.

FACTS

III. FACEBOOK EMERGES AS THE DOMINANT SOCIAL NETWORK

A. The Last Social Network Standing

40. Facebook's meteoric rise since its founding in 2004 is well documented. The company—started in the dorm room of its CEO Mark Zuckerberg as “the facebook”—rose to prominence in the face of fierce competition from several social networks. Initially an exclusive service for elite universities throughout the United States, Facebook eventually expanded its network to encompass a general audience of users throughout the United States and worldwide.

41. Between 2004 and 2010, Facebook vanquished a number of rivals to emerge as the dominant social network in the United States.

42. Facebook's first chief competitor was MySpace. Founded in 2003 (a year before Facebook), MySpace targeted the same audience, provided largely the same services, and rapidly attracted an enormous number of users. By 2005, MySpace had 25 million active users, and was acquired

1 by NewsCorp for \$580 million. In 2006, MySpace registered 100 million users, passing Google as the
2 most visited website in the United States.

3 43. However, the next three years featured a steady downward spiral for MySpace—and
4 countervailing growth by Facebook. In 2008, Facebook passed MySpace in worldwide active users and
5 continued to grow, reaching 307 million active users across the globe by April 2009. In May 2009,
6 Facebook passed MySpace in United States, 70.28 million to 70.26 million monthly active users.

7 44. MySpace never came close to Facebook again. By 2010, MySpace had mostly exited the
8 market, leaving the business of social media for good. MySpace's CEO capitulated in November of 2010:
9 "MySpace is not a social network anymore. It is now a social entertainment destination." In September
10 2010, MySpace reported that it had lost \$126 million, and in June 2011, NewsCorp sold the company for
11 \$35 million—\$545 million less than it had paid just six years earlier. By then, its user base had dwindled
12 to just 3 million monthly visitors.

13 45. During the same time period, several other social networks also met their demise,
14 including Google's Orkut, AOL's Bebo, and Friendster, which failed to scale rapidly enough to compete
15 with MySpace and Facebook.

16 46. By 2009 and through 2010, Facebook emerged as the only peer-to-peer social media
17 network to exist at scale, and no other network or company rivaled Facebook's massive user base. On
18 March 2, 2010, *Adweek* reported that Facebook had booked revenues of up to \$700 million in 2009 and
19 was on track for \$1.1 billion in 2010—almost all from advertising to its newly won users. Facebook had
20 been roughly doubling its revenues every year up until that point—\$150 million in 2007, \$280-300
21 million in 2008, and \$700 million in 2009.

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1 47. Time Magazine heralded Zuckerberg as its 2010 Person of the Year.



13 48. Time's cover story set out the stakes—the scope of the newly assembled social network
14 was unprecedented and staggering:

15 What just happened? In less than seven years, Zuckerberg wired together a
16 twelfth of humanity into a single network, thereby creating a social entity
17 almost twice as large as the U.S. If Facebook were a country it would be
18 the third largest, behind only China and India. It started out as a lark, a
19 diversion, but it has turned into something real, something that has changed
20 the way human beings relate to one another on a species-wide scale. We
21 are now running our social lives through a for-profit network that, on paper
22 at least, has made Zuckerberg a billionaire six times over.

23 49. By 2010, Facebook was unrivaled and dominant in a way no company since Microsoft
24 had been in post-personal-computer history. And it had done so by riding the currents of powerful
25 network effects.

26 **B. A New Market of Its Own Creation**

27 50. By the beginning of the millennium's second decade, Facebook was the indisputable king
28 of an entirely new market—a market built not on hardware or operating system dominance, but one built
29 on a network of people, with its power and value directly derived from their engagement with that

1 network. The more data users fed into Facebook by communicating and interacting with each other,
2 posting their pictures, and publishing their content, the more valuable the Facebook network became to
3 third parties, who could advertise to Facebook's users by targeting them using the very information they
4 provided to Facebook's network.

5 51. Data about what information users shared on their personal pages; the photos and profiles
6 they viewed; their connections to others; what they shared with others; and even what they put in
7 messages to other users all allowed targeted advertising on a scale that had never before existed. Unlike
8 search advertising, Facebook's advertising platform allowed advertisers to target Facebook's user base
9 by their attributes and behavior, not by a query entered into a search box. More importantly, unlike in
10 search, user identity was not only discoverable, it was willingly provided by users—as was the identity
11 of those users' closest friends and family members. These identities could be tracked and targeted
12 throughout the Internet.

13 52. This social data created by Facebook's network of engaged users could be monetized in a
14 number of ways. The data could be resold for targeted advertising and machine learning; Facebook's
15 machine learning algorithms mined patterns in the data for advertisers, which allowed advertisers to reach
16 precisely the right audience to convert into sales, user signups, or the generation of sales leads. The data
17 also could be sold by commercializing access—for example, by providing application developers, content
18 generators, and advertisers with direct access to the information embedded in Facebook's network, such
19 as the interconnection between users, user attributes, and user behavior. That data then could be mined
20 by these third parties.

21 53. All of the methods of monetizing social data were based on selling that data, but such data
22 could be packaged, structured, or mined differently depending on the application for which it was being
23 sold. For advertisers, Facebook's network presented advertisers and Facebook itself with entirely new
24 social signals, such as relationships, events, friendships, and granular interests. Movies, music, and books
25 were inherent parts of a user's profile. The amount of information in Facebook's network that could be
26 mined as social data was unprecedented—and Facebook received all that data daily from its millions of
27 users in the United States and worldwide.

1 54. The data Facebook collected was uniquely social, derived from the engaged interactions
 2 and strong identity of Facebook's users. Twitter, a public-facing social network, loosely enforced identity
 3 and never required users to disclose granular details about themselves. Facebook stood alone in this
 4 regard, with a clear product emphasis on individuals and their connections to others. In 2010, Google,
 5 Yahoo, and the other major online advertising sources competed in an entirely different market—one
 6 based on search data. The data Facebook had at its disposal was not fungible with search data—it was
 7 actionable data about individual users, with their identities fully ascertainable.

8 55. By 2010, Facebook stood alone as the dominant player in the newly emergent market for
 9 social advertising—a market in which Facebook's own users provided Facebook with a constant stream
 10 of uniquely valuable information, which Facebook in turn monetized through the sale of advertising.
 11 Advertisers, finding no substitute from any other company, paid top dollar for Facebook's powerful
 12 targeting and actionable data, and some of those advertisers—wittingly or not—even fed crucial data
 13 about themselves, their products, and the efficacy of their targeting back to Facebook's network.

14 56. As Facebook itself explained to third-party developers in May 2007, Facebook's core
 15 value proposition and business model was “providing access to a new kind of data—social data, which
 16 enables you to build applications that are relevant to users.” With respect to that data, Facebook told
 17 developers: “You are on a level playing field with us. You can build robust apps, not just widgets.
 18 Complete integration into the Facebook site.” By 2010, it was clear that Facebook's entire business was
 19 selling this new form of “social data” and that it would do so by selling access to developers and selling
 20 advertisements targeting Facebook's network of engaged and active users.

21 **C. The Social Data Barrier to Entry**

22 57. As Facebook's dominant position emerged in 2010, powerful network effects and
 23 feedback loops took hold and solidified that position. Data provided by users made Facebook's network
 24 more valuable, thereby attracting more users to the network. As a typical use case, a Facebook user would
 25 invite his closest friends and family, who would then invite and engage with other friends and family
 26 members who existed on the network. A familiar feedback loop—a virtuous circle—emerged, rapidly
 27 growing Facebook's user base.

1 58. The content generated by this user base, in turn, increased the value of the Facebook
 2 network. With each photograph, relationship status, check-in, or post by a Facebook user, the Facebook
 3 network became more valuable, not just as a means of communicating with directly connected
 4 acquaintances, but as a means of learning about more remotely connected ones.

5 59. As Samuel Lessin, then Facebook's VP of Product Management, explained to Mark
 6 Zuckerberg in an internal email on October 26, 2012, the data Facebook collects makes Facebook
 7 progressively more proficient at collecting and monetizing data:

8 One of the things that puts us currently in a very defensible place is the
 9 relationship we have created between the people using Facebook all the
 10 time, and us having the information we need to make Facebook a better
 11 product. This is the fundamental insight in something like coefficient. ***We
 12 know more about what people want to see because people look at more
 13 stuff on our platform.*** In this respect, while there are other ways to get
 14 close, it feels viscerally correct that there is an ROS dynamic at play, ***the
 15 more people that use the system, the more information we have on how
 16 to make more people use the system.***

17 (emphasis added).

18 60. A barrier to entry emerged from this feedback loop. To compete with Facebook, a new
 19 entrant would have to rapidly replicate both the breadth and value of the Facebook network—a task a
 20 mere clone of that network could not accomplish. Indeed, to compete with Facebook, a competitor would
 21 not only have to build its own vast network, but would have to draw active social engagement on a
 22 massive scale—which likely would require drawing a vast quantity of Facebook users away from that
 23 platform. The costs to switch would be massive: an entrant-competitor would have to present an overall
 24 value proposition to users that not only exceeded that of Facebook's entrenched network, but one that did
 25 so handily. Moreover, to compete with Facebook's virtuous circle, the value delivered by an entrant-
 26 competitor platform would have to facilitate social data mining that would create even more value for
 27 users, developers, and advertisers. This barrier to entry is referred to throughout this Complaint as the
 28 Social Data Barrier to Entry ("SDBE").

29 61. The SDBE protects Facebook's ability to control and increase prices in the Social
 30 Advertising Market without the pressures of price competition from existing competitors or new entrants.

1 Because of its monopoly power in the Social Advertising Market and the SDBE, Facebook has been able
 2 to consistently increase the price it charges for social advertising. And this is exactly what Facebook has
 3 done since it obtained its dominant position in 2010.

4 62. From 2011 to 2012, for example, Facebook massively increased the prices it charged for
 5 its advertisements—one of the primary sales channels for its social data. That year, costs per thousand
 6 impressions (CPM) on Facebook increased by 41%, with a 15% increase in the last quarter of 2011 alone.
 7 Cost per click (CPC), which is a measure of advertising costs paid on a by-click basis, rose 23% that
 8 same year. Facebook increased prices for social advertising as it also grew the number of advertisements
 9 it displayed on its site, indicating monopoly power in the Social Advertising Market.

10 63. Facebook maintained that power over its prices through 2013, with a 2.9x increase in
 11 CPMs year over year. The increase came as overall advertising revenues increased yet again—that year
 12 by a staggering 83% over the last.

13 64. These price increases would not be possible without the SDBE. If a rival network existed
 14 with comparable social data available for sale through advertising, Facebook’s price increases would
 15 have been met with customer migration to the comparable rival. But Facebook had no such rival and was

16 **Figure 1: Retail Facebook CPM, Q4 2012 – Q4 2013**



23 unfettered in its ability to increase prices, even while rapidly increasing its supply of data for sale through
 24 advertisement.

25 65. Once Facebook had achieved dominance in the Social Advertising Market, its position
 26 only improved—and became more entrenched. The more advertising Facebook sold, and the more social
 27

1 data Facebook collected and packaged for sale, the more effective Facebook became at selling
 2 advertising, targeting users, and commercializing direct access to its users' social data (e.g., through
 3 APIs). This, in turn, made entry by a new rival impossible or prohibitively costly, thereby allowing
 4 Facebook to increase prices and make additional investments that deepened the SDBE moat surrounding
 5 its business.

6 **D. Google's Failed Entry into the Social Advertising Market**

7 66. In 2010, Google became desperate to enter the Social Advertising Market. It had tried
 8 several times to do so before, but each foray was met with failure. Google's Orkut social network, which
 9 was launched days before Facebook, was quickly overtaken. Wave, Google's social communication
 10 platform, never achieved any traction with users. And Google's Buzz social network—built on the back
 11 of its highly successful Gmail product—imploded quickly in early 2010.

12 67. Google's next attempt to enter the market attacked Facebook's functionality head-on,
 13 which meant attempting to penetrate the powerful SDBE protecting Facebook's business. Google made
 14 a massive, unprecedented investment of resources into building a product with enough value to lure users
 15 away from Facebook's broad, highly engaged social network.

16 68. In 2010, Google's Vic Gundotra became the company's Chief Architect. Gundotra pitched
 17 a new social network to Larry Page, Google's cofounder, who returned as CEO of the company in 2011.
 18 Gundotra repeated an ominous refrain, "Facebook is going to kill us. Facebook is going to kill us," which
 19 frightened Page into action.

20 69. Page greenlit a new product, Google+. Initially, Google+ sought to leverage Google's
 21 YouTube product to build its social network, requiring a Google+ account for access to certain key
 22 features of YouTube. In the face of significant user resistance, Google backed away from that
 23 requirement. Nonetheless, Google attempted, through Google+, to build out a "social graph" that would
 24 leverage a common user identity across Google products, including YouTube and Gmail.

25 70. In early 2011, Google began what insiders now refer to as "the 100-day march" toward
 26 launch of Google+. The product Google planned to deliver was, by any fair account, largely
 27 undifferentiated from what Facebook offered in terms of product features and functionality. By the
 28

1 summer of 2011, the planned features for Google+ included a continuous scroll product called the
 2 “stream” (a clone of Facebook’s “feed” product); a companion feature called “sparks,” which related the
 3 “stream” to users’ individual interests; and a sharing app called “Circles,” a purportedly improved way
 4 to share information with one’s friends, family, contacts, and the public at large.

5 71. Unlike Google’s past products, Google+ was not designed to organically grow and scale
 6 from small beginnings. From the outset, Google invested massive amounts of resources to bring a
 7 finished, full-scale social network to market. Calling the project “Emerald Sea,” Google conscripted
 8 almost all of the company’s products to help build Google+. Hundreds of engineers were involved in the
 9 effort, which remained a flagship project for Page, who had recently reassumed the Google CEO role.
 10 Google’s Gundotra was quoted explaining that the product that would become Google+ was a
 11 transformation of Google itself: “We’re transforming Google itself into a social destination at a level and
 12 scale that we’ve never attempted—orders of magnitude more investment, in terms of people, than any
 13 previous project.”

14 72. The amount of resources Google brought to bear stood in stark contrast to its previous
 15 attempts at penetrating the Social Advertising Market. Google had dedicated barely a dozen staff
 16 members to its previous failed social network product, Buzz. At its peak, Google+ involved 1,000
 17 employees from divisions across the country. Google, for example, ripped out its elaborate internal video
 18 conferencing system and forced employees to use the Google+ Hangouts video chat feature, which one
 19 internal employee described as “janky.” Employee bonuses were tied to the success of Google+. And the
 20 entire project was confined to a level of secrecy never before seen at Google.

21 73. Google+ was released on June 28, 2011. The product included the “stream,” the “Circles”
 22 app, the “Hangout” video chat and messaging product, and a photo sharing product. The resemblance to
 23 Facebook was striking. As one internal Google employee commented: “this looks just like Facebook.
 24 What was the big deal? It’s just a social network.” Another Google employee was quoted as saying, “All
 25 this fanfare and then we developed something that in the end was quite ordinary.” One thing was
 26 indisputable: with the release of Google+, Google had challenged Facebook head-on by effectively
 27 cloning Facebook’s product.

1 74. Because Google's user base was already massive, the Google+ product attracted millions
 2 of users shortly after launch. But though these users signed up for Google+, Google quickly found out
 3 they were not using the product. As one former Google employee explained:

4 It was clear if you looked at the per user metrics, people weren't posting,
 5 weren't returning and weren't really engaging with the product. Six months
 6 in, there started to be a feeling that this isn't really working.

7 75. The problem for Google+ was the powerful network effect that reinforced the SDBE that
 8 protected Facebook. Google's clone of Facebook did not present enough new value to overcome massive
 9 network-based switching costs—the cost to Facebook users of shifting away from an existing networked
 10 product in which the users had actively invested their social data for years.

11 76. Paul Adams, a former Google+ user-experience team member, summed it up succinctly
 12 when asked why Google+ had failed:

13 What people failed to understand was Facebook and network effects. . . .
 14 It's like you have this grungy night club and people are having a good time
 15 and you build something next door that's shiny and new, and technically
 16 better in some ways, but who wants to leave? People didn't need another
 17 version of Facebook.

18 77. By 2014, Google+ was declared a failure and Gundotra, its founder, eventually left
 19 Google. Within just a few years, Google—with all of its resources, developers, and existing user base—
 20 failed entirely to overcome the SDBE protecting Facebook. As long as Facebook controlled the data
 21 derived from an engaged and active user base, it could continue to keep that user base active and engaged.

22 78. The only way to disrupt this virtuous circle was with a rival product that provided
 23 significantly more or different value than Facebook, and that itself was propelled to scale by powerful
 24 network effects.

25 **IV. A THREAT TO FACEBOOK'S MONOPOLY: THE RISE OF SMARTPHONES AND**
 26 **MOBILE APPS**

27 **A. The Mobile App Revolution**

28 79. In 2009 and 2010, as Facebook emerged the undisputed winner of the social media wars,
 29 another new market had begun to take hold. The launch of the Apple iPhone in 2007 created a market for

1 a new type of cellular phone: one with a user interface capable of robust Internet connectivity and
 2 messaging. No longer constrained by numeric keypads for texting—or chunky, permanent alphanumeric
 3 keyboards attached to phones, such as with the Treo or Sidekick cellular phones—the iPhone dynamically
 4 displayed a multi-touch keyboard and came equipped with a full-featured web browser that rendered
 5 complete web pages.

6 80. By the summer of 2008, Apple's newest iPhone, the iPhone 3G, was released with onboard
 7 GPS and other hardware upgrades. Accompanying the release of the new iPhone was a new store for
 8 third-party applications that would run natively on the iPhone: the Apple App Store, which opened for
 9 business on July 10, 2008, the day before the release of the iPhone 3G.

10 81. Developers who launched their third-party applications via the App Store reaped huge
 11 rewards. There were approximately 500 apps available at the App Store's initial launch. Games using the
 12 iPhone's accelerometer became immediate successes, some quickly earning hundreds of thousands of
 13 dollars by selling downloads for just a few dollars each. Applications that exploited the new GPS
 14 functionality in the iPhone also quickly became popular. By September 2008, the Apple App Store had
 15 racked up 100 million downloads, and by 2009, it hit 1 billion. iPhone apps had become a new means to
 16 deliver scaled value to countless users.

17 82. Google also launched what became its Play Store (initially known as Android Market) in
 18 2008. It soon overtook Apple's App Store in terms of overall volume, with 82% growth. The mobile app
 19 revolution had begun.

20 83. Mobile apps rapidly proliferated, with huge opportunities for further growth—as the lion's
 21 share of cell phone activity by 2010 had become something other than making phone calls. For example,
 22 a 2010 Pew Research survey showed that taking pictures and sending text messages had become the most
 23 common uses for cellular phones among adults, with more than a third of adult cell phone users accessing
 24
 25
 26
 27
 28

1 the Internet, playing games, emailing, recording video, or playing music through their cell phones. At the
 2 same time, 29% of adult cell phone users had used a downloaded app.

3 *% of adult cell phone users who do each of the following on their phone...*

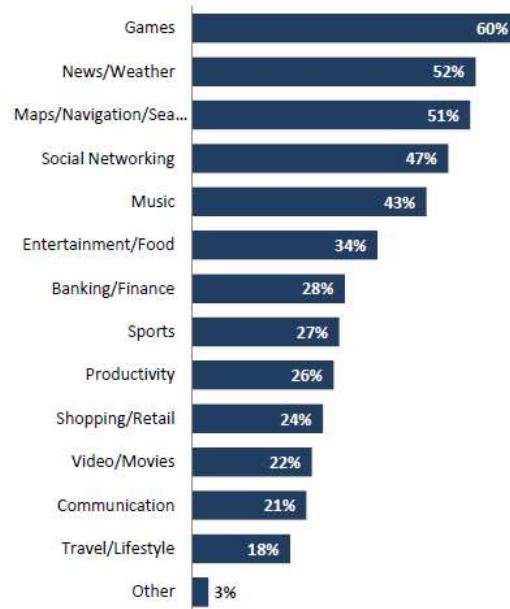
Take a picture	76%
Send or receive text messages	72
Access the internet	38
Play a game	34
Send or receive email	34
Record a video	34
Play music	33
Send or receive instant messages	30
Use an app	29

11 Source: Pew Research Center's Internet & American Life Project, April 29-May 30,
 12 2010 Tracking Survey. N=1,917 adult cell phone users.

13 84. A 2010 Nielsen survey showed that games, news/weather, maps and navigation, and social
 14 networking were the most popular apps on cellular phones.

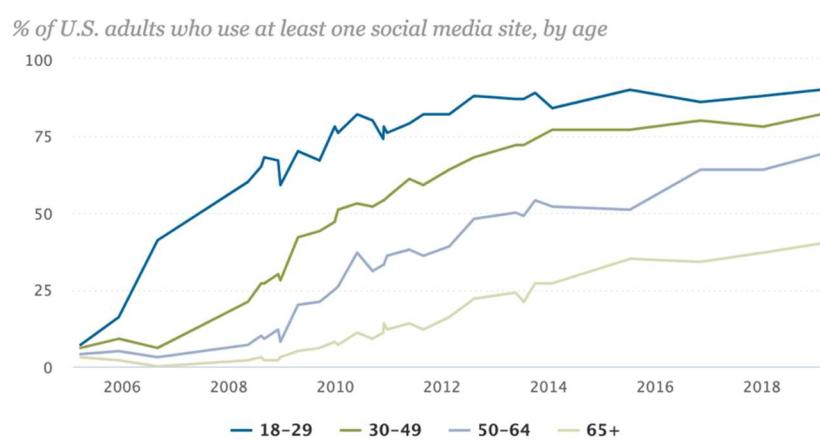
15 **What are the most popular types of apps?**

16 *% of Nielsen recent downloaders who have used each category
 17 of apps in the past month...*



27 Source: The Nielsen App Playbook, December 2009. N=3,962 adults who
 28 have downloaded an app in the 30 days prior to the survey.

85. Notably, mobile apps resonated most strongly with the demographics that had recently adopted social media and were providing their data to Facebook in droves. App users among cell phone owners were disproportionately younger, with 44% of app users in 2010 under the age of 20 and another 41% between the ages of 30 and 49. These were the same demographics that were rapidly adopting social media as part of their lives and providing Facebook with the social data that built and maintained the SDBE that protected its business.



Source: Surveys conducted 2005-2019.

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86. Many of the mobile apps that were rapidly attracting users were doing so because they presented their own specialized value propositions. These apps had to be specialized because cellular phone screens were smaller, particularly in 2010, and mobile traffic was driven by specialty software, often designed for a single purpose. Users signed up for these apps with their e-mail addresses and personal information and interacted directly with the apps.

87. As WIRED Magazine described in 2010, a typical user moved from app to app, each with some specialized use:

You wake up and check your email on your bedside iPad—that's one app. During breakfast you browse Facebook, Twitter, and the New York Times—three more apps. On the way to the office you listen to a podcast on your smartphone. Another app. At work, you scroll through RSS feeds in a reader and have Skype and IM conversations. More apps. At the end of the day, you come home, make dinner while listening to Pandora, play

1 some games on Xbox Live, and watch a movie on Netflix's streaming
 2 service.

3 88. In 2010, Morgan Stanley projected that within five years, the number of users who
 4 accessed the Internet from mobile devices would surpass the number who accessed it from PCs. The
 5 Internet was at an inflection point—the World Wide Web was no longer the dominant way to access
 6 information. Users were obtaining their information from specialized walled gardens, and Facebook's
 7 own walled garden was one app away from being superseded.

8 89. The years leading up to 2010 saw the rise of streaming apps, such as Netflix and Pandora,
 9 and e-book readers, such as Kindle and iBooks. Apple's 2010 list of top-grossing iPhone apps included
 10 mobile games such as Angry Birds, Doodle Jump, Skee-Ball, Bejeweled 2 + Blitz, Fruit Ninja, Cut the
 11 Rope, All-in-1 GameBox, the Moron Test, Plants vs. Zombies, and Pocket God. Facebook's mobile app
 12 topped the list of free downloads in the App Store, along with Words with Friends, Skype, and the
 Weather Channel App.

13 **B. Facebook Recognizes the Looming Threat Presented by Mobile Applications**

14 90. By 2011, Facebook realized that it had fallen behind. Facebook had just debuted its new
 15 "Timeline" product, a controversial modification of the Facebook feed that generated dynamic content
 16 for each user rather than a static series of posts visible to the user. Facebook had spent the last eight
 17 months prioritizing its desktop experience and its new Timeline product. But while it did so, mobile
 18 applications continued their meteoric rise.

19 91. Facebook's own mobile application was built on a technology called HTML5, which at
 20 the time was good for building web pages but not for building mobile apps native to iOS and Android
 21 smartphones. As a result, Facebook's mobile app was buggy, prone to crashes, and painfully slow. As
 22 Zuckerberg would lament years later about HTML5, "We took a bad bet."

23 92. Zuckerberg reflected in 2018 that Facebook had fallen behind when mobile apps emerged:

24 One of my great regrets in how we've run the company so far is I feel like
 25 we didn't get to shape the way that mobile platforms developed as much as
 26 would be good, because they were developed contemporaneously with
 27 Facebook early on. I mean, iOS and Android, they came out around 2007,
 28

1 we were a really small company at that point—so that just wasn't a thing
 2 that we were working on.

3 93. As mobile apps rose, Facebook's desktop product acquired users at a slower pace. All of
 4 this occurred as Facebook was planning its initial public offering. Facebook knew that its position was
 5 eroding and that if mobile growth continued, its IPO debut would be in the midst of material changes to
 6 its business, undermining Facebook's financial and qualitative disclosures to public investors.

7 94. But there was no avoiding the issue. Facebook held its IPO on May 18, 2012. By the time
 8 Facebook released its first annual report, the trend was unmistakable—the transition to mobile devices
 9 from desktop web-based applications posed an existential threat to Facebook's business. In its 2012 Form
 10-K, Facebook disclosed this risk to shareholders as one of the factors that affected its bottom line:

11 ***Growth in the use of Facebook through our mobile products as a
 12 substitute for use on personal computers may negatively affect our
 13 revenue and financial results.***

14 We had 680 million mobile MAUs in December 2012. While most of our
 15 mobile users also access Facebook through personal computers, we
 16 anticipate that the rate of growth in mobile usage will exceed the growth in
 17 usage through personal computers for the foreseeable future and that the
 18 usage through personal computers may decline or continue to decline in
 19 certain markets, in part due to our focus on developing mobile products to
 20 encourage mobile usage of Facebook. For example, during the fourth
 21 quarter of 2012, the number of daily active users (DAUs) using personal
 22 computers declined modestly compared to the third quarter of 2012,
 23 including declines in key markets such as the United States, while mobile
 24 DAUs continued to increase. While we began showing ads in users' mobile
 25 News Feeds in early 2012, we have generated only a small portion of our
 26 revenue from the use of Facebook mobile products to date. In addition, we
 27 do not currently offer our Payments infrastructure to applications on
 28 mobile devices. If users increasingly access Facebook mobile products as
 a substitute for access through personal computers, and if we are unable to
 continue to grow mobile revenues, or if we incur excessive expenses in this
 effort, our financial performance and ability to grow revenue would be
 negatively affected.

24 **C. The Facebook Platform**

25 95. Although Facebook faced a looming threat from mobile applications, it maintained an
 26 important source of leverage: its social data. Facebook possessed (and continued to receive) vast
 27 quantities of information about its massive user base, including how each user was connected to others.

1 This information was valuable to both new and existing mobile applications, which could leverage
 2 Facebook's social data to obtain new users and to build novel social features, functions, and apps.

3 96. Facebook referred to its network as its "Graph," coined after a mathematical construct
 4 that models connections between individual nodes. The Facebook Graph contained user "nodes," with
 5 connections and information exchanged among nodes as "edges." Facebook coined the term "Open
 6 Graph" to describe a set of tools developers could use to traverse Facebook's network of users, including
 7 the social data that resulted from user engagement.

8 97. Importantly, Open Graph contained a set of application programming interfaces ("APIs")
 9 that allowed those creating their own social applications to query the Facebook network for information.
 10 As Facebook explained in its 2012 Form 10-K:

11 ***Open Graph.*** Our underlying Platform is a set of APIs that developers can
 12 use to build apps and websites that enable users to share their activities with
 13 friends on Facebook. As Open Graph connected apps and websites become
 14 an important part of how users express themselves, activities such as the
 15 books people are reading, the movies people want to watch and the songs
 16 they are listening to are more prominently displayed throughout
 17 Facebook's Timeline and News Feed. This enables developer apps and
 18 websites to become a key part of the Facebook experience for users and
 19 can increase growth and engagement for developers.

20 98. Open Graph, along with other Facebook products, such as its NEKO advertising and
 21 Payments products, comprised Facebook's Platform. The Platform was vital to Facebook's business
 22 because it ensured that engagement continued on Facebook. Without the Platform, Facebook would be
 23 required to build applications that increased the value of its network itself—meaning that Facebook would
 24 have to try to predict what applications users wanted; design, code, and scale those applications across
 25 its user base and network; and bear the risk and resource drain of guessing wrong and making mistakes.

26 99. Facebook did not have the resources to do this, so it decided instead to allow third parties
 27 to build applications for the Platform. As Mark Zuckerberg observed in a February 2008 email to
 28 Facebook's VP Engineering for Platform Michael Vernal, a senior Zuckerberg lieutenant who was in part
 responsible for creating Open Graph:

1 Platform is a key to our strategy because we believe that there will be a lot
 2 of different social applications And we believe we can't develop all
 3 of them ourselves. Therefore It's important for us to focus on it
 4 because the company that defines this social platform will be in the best
 5 position to offer the most good ways for people to communicate and
 6 succeed in the long term.

7 100. Put simply, Facebook could either speculate on new social applications by building them
 8 itself or it could provide a platform for others to do so. For years, Facebook opted to provide a platform
 9 until it was able to develop its own social applications.

10 101. But Facebook also recognized that developers on its Platform could potentially pose a
 11 competitive threat. In its 2012 annual report, Facebook disclosed the following significant risk factor to
 12 its operations:

13 In addition, Platform partners may use information shared by our users
 14 through the Facebook Platform in order to develop products or features that
 15 compete with us. . . . As a result, our competitors may acquire and engage
 16 users at the expense of the growth or engagement of our user base, which
 17 may negatively affect our business and financial results.

18 102. Thus, Facebook knew that competition could come from its own third-party application
 19 developers. But Facebook nevertheless actively sought developers to build applications on its Platform
 20 because of the potential to extract profits from the applications these developers built and the users they
 21 attracted to, and engaged on, Facebook's network.

22 103. As Facebook explained to its investors in 2012, maintaining a Platform on which
 23 developers could build applications meant more engagement and therefore greater ad revenues for
 24 Facebook:

25 Engagement with our Platform developers' apps and websites can create
 26 value for Facebook in multiple ways: our Platform supports our advertising
 27 business because apps on Facebook create engagement that enables us to
 28 show ads; our Platform developers may purchase advertising on Facebook
 to drive traffic to their apps and websites; Platform developers use our
 Payment infrastructure to facilitate transactions with users on personal
 computers; Platform apps share content with Facebook that makes our
 products more engaging; and engagement with Platform apps and websites
 contributes to our understanding of people's interests and preferences,
 improving our ability to personalize content. We continue to invest in tools
 and APIs that enhance the ability of Platform developers to deliver

1 products that are more social and personalized and better engaged people
 2 on Facebook, on mobile devices and across the web.

3 104. Facebook's Platform was valuable to Facebook in several important ways.

4 105. First, the Platform meant that new applications would be built on Facebook's network,
 5 increasing the value of Facebook's network as the applications became more popular. The increased
 6 engagement with Facebook as a result of these new applications translated to better-targeted content and
 higher advertising revenues.

7 106. Second, Facebook would not need to spend significant resources to develop new
 8 applications or test new business models—third parties would do that instead. Facebook could merely
 9 wait for an application built for its Platform to gain widespread adoption, then either build a competing
 10 application or passively glean the benefits of that popular application's user engagement, including
 11 valuable new social data for Facebook and its network.

12 107. Third, access to Facebook's network was itself valuable to third-party developers, so
 13 Facebook could charge developers—most notably, through API access and advertising purchases—to
 14 access Facebook's Platform and the social data it collected from Facebook's massive number of engaged
 15 users.

16 **D. The Profitable Open Graph Platform and Mobile Install Business**

17 108. Facebook continued to struggle to catch up with the new onslaught of mobile applications,
 18 but it recognized that the new apps required aggressive user growth to be profitable. Among other things,
 19 Facebook's APIs allowed mobile app developers to query the friends of a person's friends, which allowed
 20 mobile applications to find other users who might be interested in using their apps.

21 109. Mobile apps also could use Facebook to communicate across Facebook's network, either
 22 directly with a user's friends or with others not directly connected with the user. A mobile payment
 23 application, for example, could enable two strangers to pay each other, even if they were not directly
 24 connected on Facebook—so long as both of them existed somewhere on Facebook's Platform. A user of
 25 a dating application, such as Tinder, could use Facebook's APIs to find a compatible date, either in the
 26 extended network of one's friends or beyond—anywhere on Facebook's Platform.

1 110. Facebook quickly realized it could monetize the value of its network through third-party
 2 mobile applications, and it moved aggressively to do so, beginning with games built to run on Facebook's
 3 Platform. Those games, many of which were social games that allowed users to play with and against
 4 each other, sought above all else new users to increase their adoption. Facebook's Vernal sought to obtain
 5 a beachhead with these applications, monetizing each additional game install that resulted from the use
 6 of Facebook's Platform or from Facebook's advertising product, NEKO.

7 111. For example, Facebook included ads as "stories" on user timelines that indicated whether
 8 the user knew other users who were playing a particular game. Facebook then monetized such
 9 advertisements when the game obtained new users from them. As Vernal explained in a May 2012 e-
 10 mail:

11 The biggest/most efficient market segment for advertising on mobile today
 12 is driving app installs. This is at least partly because it's the most
 13 measurable—if you know that you get \$0.70 from every game you sell,
 14 then in theory you can afford to pay up to \$0.69/install. This kind of
 15 measurability allows for maximal bidding.

16 So, what we're trying to do is kickstart our sponsored stories business on
 17 mobile by focusing on one particular type of story (is-playing stories) and
 18 one market segment (games), make that work really well, and then expand
 19 from there.

20 112. Facebook thus leveraged its most valuable asset—the information it had about its users,
 21 their interests, and most importantly, their friends—to make money from the proliferation of mobile
 22 games.

23 113. Games like Farmville, a mobile application that allowed players to create their own
 24 simulated farms, quickly took off because of Facebook's Platform. Facebook increasingly recognized
 25 that it could obtain engagement from users through the game itself.

26 114. This strategy led to a broader one, in which Facebook drove app installs by allowing
 27 developers to advertise to its user base and traverse Facebook's social network through the Facebook
 28 APIs. Facebook collected a fee for each app install that resulted from its network. Vernal outlined the
 plan in detail:

Roughly, the plan:

1/ Create new iOS + Android SDKs, because the current ones are terrible.
Ship Thunderhill so we get even broader adoption of our stuff.

2/ Wire them up to make sure we know when you're playing a game (so we can generate the same kind of is-playing stories we can on canvas).

3/ Generate a bunch of effective, organic distribution for these games via our existing channels (news feed, net ego on both desktop + mobile). Ship send-to-mobile, which allows us to leverage our desktop audience to drive mobile app traffic.

4/ Create an even better app store than the native app stores (our app center) and make a lot of noise about it, so developers know that they should be thinking about us to get traffic to their mobile apps.

5/ Introduce a paid offering, probably cost-per-install (CPI) based, where you can pay us to get installs from your mobile app. Primary channels for this paid distribution are News Feed and App Center (on desktop + mobile) as well as RHC on desktop.

115. The strategy was clear, not just for gaming, but for mobile apps. Facebook would make money by allowing app developers to leverage its user base. Facebook would advertise social games to its users by plumbing their social data—including data about when they played games and which of their friends played them—and in exchange, Facebook would receive some amount of money per install, which would be the app developer's cost-per-install (CPI). The same plan would work for mobile applications generally.

116. By the end of 2011 and the beginning of 2012, Facebook began discussing other ways to monetize its Platform, including its Open Graph APIs. One way was to sell API access based on usage. Zuckerberg and top executives at Facebook extensively debated a tiered approach to API access. Facebook deliberated over a pricing model for API access, and internally decided that it would be possible to sell API access to third-party developers. Facebook also decided that it could bundle API access with the ability to advertise on Facebook. However, as explained below, Facebook gave up the profits it could glean from API access for the chance to dominate the Social Advertising Market entirely, excluding competitors (both actual and potential) and leveraging network effects to achieve and maintain monopoly power.

V. FACEBOOK WEAPONIZES ITS PLATFORM TO DESTROY COMPETITION

A. **Facebook Makes Plans to Remove Vital Friends and News Feed APIs and Refuses to Sell Social Data to Competing Application Developers**

117. Although Facebook had made significant amounts of revenue and profit selling access to its social data through its APIs and its NEKO advertising system and had planned to expand that business, it chose not to, sacrificing those significant profits.

118. By the end of 2011 and the beginning of 2012, Zuckerberg along with Facebook's Vice President of Growth, Javier Olivan, its VP of Product Management, Samuel Lessin, and Michael Vernal internally debated a plan to prevent third-party developers from building their own competing social networks that could be capable of generating engagement and social data independent of Facebook's Platform.

119. Emerging mobile applications such as Line, WeChat, and Instagram were creating their own vast user bases with identity and login features separate from the Facebook Platform. Their increasing ubiquity posed an existential threat to Facebook's core business, which relied heavily on engagement from its user base. These applications provided quintessentially social applications, such as image sharing, messaging, and payments—a direct threat to Facebook's own applications, including Facebook's own fledgling Messenger application.

120. Mobile applications were rapidly eating away at Facebook's dominance, which relied heavily on its web-based desktop product. Zuckerberg openly acknowledged that its desktop applications were not the future and that native phone apps would dominate the mobile web in the future.

121. Zuckerberg therefore sought to consolidate core applications into its own centralized Facebook application, noting in a March 2012 Q&A with employees that Facebook was “building towards social Facebook versions where you can use the individual app or the Facebook version.” That is, users could “replace whole parts of your phone with these Facebook apps and [they] will be a whole package for people.”

122. Beginning in the fall of 2011 and well into 2012, Mark Zuckerberg and his chief lieutenants, Lessin and Vernal, planned to address the looming mobile applications threat. Their solution was a scheme to disrupt the massive growth of mobile applications by attracting third-party developers

1 to build for Facebook's Platform and then remove their access to the APIs that were most central to their
 2 applications. They would accomplish this by leveraging Facebook's "Friends" and "Timeline" APIs, as
 3 well as other vital APIs, including those relating to messaging.

4 123. The Friends APIs let third-party developers traverse the Facebook Graph, searching
 5 through a user's friends as well as the friends of their friends. Zuckerberg and his executives proposed
 6 modifying the APIs to deny third-party developers access to information about a user's friends (and the
 7 friends of their friends) unless that developer's application was already installed by a user's friends to
 8 begin with. This ensured that new applications could not obtain new users or use Facebook's social data
 9 to increase the value of their application.

10 124. Facebook also foreclosed developers from continuing to extract information about a user's
 11 friends from their timeline or news feed. Thus, third-party applications that relied on the stream of
 12 information that flowed through a user's news feed, such as a post about a friend of the user getting
 13 engaged or sharing a news article, would be abruptly left with none of the social data they needed to
 14 function.

15 125. Removing access to these APIs halted the growth of tens of thousands of third-party
 16 applications that relied on these essential APIs and were, in Facebook's view, threatening Facebook's
 17 dominance by eroding the SDBE that protected Facebook's business.

18 126. Facebook's plan prevented any competitive third-party application from buying social
 19 data from Facebook, either through its Platform APIs or through its advertising Platform. As Vernal
 20 explained to Lessin in August of 2012, Facebook would "not allow things which are at all competitive to
 21 'buy' this data from us."

22 127. Facebook thus refused to sell its social data to any competitive third-party developer,
 23 sacrificing significant short-term profits in exchange for a competitive advantage in the Social
 24 Advertising Market. If not for the prospect of driving these competitors out of the markets in which
 25 Facebook competed, the decision to refuse to sell social data to third-party developers made no economic,
 26 technical, or business sense.

1 128. Third-party developers with successful applications increased the value of Facebook's
 2 overall network by increasing engagement and generating the very social data Facebook sold through its
 3 targeted advertising channels, including to developers. As Zuckerberg had observed years earlier,
 4 Facebook itself could not broadly develop new third-party apps or anticipate what apps would be
 5 successful, so it relied on third parties to do so. Refusing API and social data access to third parties meant
 6 that they could not develop the applications that were vital to Facebook's growth, engagement, and
 7 advertising revenue. Facebook decided to deliberately sacrifice the value its third-party developers
 8 provided to secure dominance in the Social Advertising Market.

9 **B. Facebook's Social-Data Heist**

10 129. In May 2012, Zuckerberg decided to use the threat of blacklisting from its Platform to
 11 extract precious social data from some of Facebook's competitors. He instructed his executives to quietly
 12 require "reciprocity" from major competitors that used Facebook's Platform. The reciprocity Zuckerberg
 13 demanded was the very lifeblood of these competitors' businesses—the social data harvested from user
 14 engagement on their competing networks.

15 130. By the middle of 2012, Facebook began to block some of its competitors from using its
 16 Platform and thereby obtaining Facebook's social data. Facebook had already blocked Google, including
 17 its competing social network Google+, from access to Facebook's APIs and advertising platform. With
 18 respect to Twitter, Instagram, Pinterest, and Foursquare, Facebook would demand "reciprocity" or
 19 blacklist them. Reciprocity, of course, meant that these competing social networks would have to hand
 20 over their most valuable asset—their social data—to their rival Facebook.

21 131. If rivals did not comply with Zuckerberg's demands to hand over their social data to
 22 Facebook, Facebook would simply take it. In May 2012, Vernal directed his subordinates, Douglas Purdy
 23 (Director of Engineering for Platform) and Justin Osofsky (VP of Global Operations), to build "our own
 24 hacky scraper" and a "bunch of scrapers" to crawl rival sites like Twitter and Instagram and harvest their
 25 social data—with or without their consent. If Twitter or Instagram refused to agree to Zuckerberg's
 26 "reciprocity" proposition, Facebook would use the scrapers to obtain the data instead.

1 132. In August 2012, Facebook considered broadening its list of companies to shake down for
 2 social data—or to block entirely from Facebook’s Platform. That month, Facebook’s then VP of Business
 3 and Marketing Partnerships, David Fischer identified other potential product categories and competitive
 4 companies in each category to block:

5 I’d expect that a large part of the market for our network will come from
 6 current and potential competitors. Here’s the list that Jud worked up of
 7 what we’d likely prohibit if we were to adopt a ban on “competitors” using
 a broad definition:

- 8 • Social network apps (Google+, Twitter, Path, etc.)
- 9 • Photo sharing apps (Picasa, Flickr, LiveShare, Shutterfly, etc.)
- 10 • Messaging apps (WhatsApp, Viber, Imo, KakaoTalk, etc.)
- 11 • Local apps (Google+ local, Google Offers, Yelp, yp, etc.)
- 12 • Social search apps (HeyStaks, Wajam, etc.)
- 13 • Platforms (Google Play, Amazon, etc.)

14 133. Facebook thus identified its direct, horizontal competitors for social data, including those
 15 competitors that had, or could create, rival social advertising platforms. These categories of competing
 16 applications, particularly on mobile platforms, threatened Facebook’s business because they created
 17 social networks independent of Facebook, each capable of generating their own valuable social data. If
 18 Facebook lost control over these companies, it would lose access to the social data they generated, which
 19 meant Facebook’s own product could not drive engagement and sell advertising.

20 134. In August 2012, Facebook gave a presentation to its Board of Directors that included
 21 various revenue models to monetize its Platform, including its APIs. The Board understood that Facebook
 22 could monetize its Platform by charging per company, per application, per user, or per API call.

23 135. But Facebook opted to do none of those things. Instead, it decided to sacrifice those profits
 24 in the short term to obtain complete control over the growing mobile application and advertising markets,
 25 thereby maintaining and furthering its dominance of social data and the Social Advertising Market.

26 136. Facebook’s plan was to instead block competitors from using its Platform, thereby
 27 preventing them from eroding the SDBE that protected Facebook’s business. In the case of a select few

1 companies with social data that Facebook needed to maintain and grow its own business, however,
 2 Facebook would coerce them into agreements to share their most valuable social data with Facebook. If
 3 they refused, Facebook would blacklist them and take it from them anyway with its own crawling
 4 software that would scrape their public-facing site for information.

5 137. In September 2012, Zuckerberg formalized his order to shut down the Friends and News
 6 Feed/Timeline APIs and to coerce rivals into providing their valuable data to Facebook on pain of
 7 blacklisting. On October 30, 2012, Vernal notified his subordinates of Zuckerberg's decision:

8 We are going to dramatically reduce the data we expose via the Read API
 9 We are going to change friends.get to only return friends that are also
 10 using the app Since friends.get will only returned other TOSed users'
 11 data [data from users that agreed to an application's terms of service], that
 12 means we no longer need the friends_* permissions. We are going to
 13 remove/whitelist access to the Stream APIs [the News Feed API]. We are
 14 going to limit the ability for competitive networks to use our platform
 15 without a formal deal in place We are going to require that all platform
 16 partners agree to data reciprocity.

17 138. This decision meant several things: (1) when a third-party application called the Friends
 18 APIs, it could not obtain information about a user's other friends unless those friends already had installed
 19 the application; (2) the News Feed APIs would no longer provide information about a user's connections;
 20 (3) access to those API could be "whitelisted" for third-party developers that were offered—and agreed
 21 to—data reciprocity; and (4) reciprocity would be required for any access to the APIs.

22 139. In November 2012, Osofsky, who was then head of Facebook's Platform, summarized the
 23 policy changes required by the decision:

24 Policy changes: define competitive networks + require they have a deal
 25 with us, regardless of size. Maintain size-based thresholds for all other
 26 developers to force business deals. Require data reciprocity for user
 27 extended info to ensure we have richest identity.

28 140. Facebook knew that these changes would eliminate the "growth channel used by 23% of
 29 all Facebook apps" and that 89% of the top 1,000 iPhone apps relied on the full friends list API, with
 30 75% of the top 1,000 iPhone apps relying on the Friends permissions APIs. Facebook determined that
 31 popular applications on its platform with millions of customers would break as a result of the decision,

1 including FarmVille, ChefVille, CityVille, Skype, Spotify, Xobni, Texas Holdem, Yahoo, Trip Advisor,
 2 Microsoft's Birthday Reminders, Samsung's clients, Glassdoor and dozens of others.

3 141. On November 19, 2012, Zuckerberg broadly announced his decision to block competitors
 4 or require full data reciprocity for continued access. Facebook's COO Sheryl Sandberg immediately
 5 ratified the decision, adding that "we are trying to maximize sharing on Facebook, not just sharing in the
 6 world," with the note that the distinction was a "critical one" and the "heart of why."

7 142. Facebook began preparing its 2013 plan for its mobile advertising business, which
 8 included the launch of a new version of its Platform, version 3.0. Platform 3.0 would (according to
 9 Facebook) facilitate Facebook's transition from its desktop advertising business to a mobile advertising
 10 business. A central element of the transition plan was the implementation of Zuckerberg's decision to
 11 remove the Friends and News Feed APIs.

12 143. Vernal explained Zuckerberg's decision to other Facebook employees in November 2012,
 13 noting that he believed the amount of data that Facebook required from competitors was "crazy":

14 [A company must share] every piece of content by that user that can be
 15 seen by another user. What Mark is saying is he wants certain partners (I
 16 assume not all) to give us news feeds on behalf of their users, which is kind
 of crazy.

17 144. Facebook continued to formalize its plan to require the right to crawl the sites of its
 18 competitors as a condition of access to its Platform. In November 2012, Facebook's Group Product
 19 Manager, Rose Yao explained the scheme:

20 We also reserve the right to crawl a partner website for the user's data.
 21 Partners cannot blacklist or block Facebook from crawling your site or
 22 using the API. If they do, Facebook reserves the right to block the partner
 23 from using our APIs The theory behind Action Importers was that we
 24 needed to balance the leverage. You can call our APIs and access our data,
 25 as long as we can call your APIs (if you have them) or crawl your web site
 26 (if not) and access your data. It's one thing to drag your heels, but if we're
 27 the ones doing the work then we force you to make a decision—either you
 28 allow us access to your data, or you block us. If you block us, then it's
*When we first started discussing this, we were talking about doing this
 only for top partners. I think a lot of folks interpreted this as just a
 negotiation tactic—we'd just threaten to do this if they didn't cooperate.*

1 *What's changed between then and now is that this is now very clearly not*
 2 *a negotiation tactic—this is literally the strategy for the read-side*
 3 *platform.*

4 (emphasis added).

5 145. Thus, what began as a negotiation strategy to extract social data from rivals became the
 6 foundation of Facebook's Platform strategy. For competitors that posed enough of a threat to create their
 7 own rival network, Facebook required them to hand over the only leverage they had—the social data they
 8 derived from their users' engagement.

9 146. For some rivals that directly competed, no amount of data would justify access to
 10 Facebook's Platform, and for nascent threats that relied on Facebook's platform that did not have any
 11 useful data to extract, Facebook's decision was to simply cut off their access to the Friends and News
 12 Feed APIs, killing their businesses almost immediately.

13 147. Vernal expressed concern about the strategy to Zuckerberg in November 2012, noting that
 14 he was skeptical that competitors such as Pinterest would allow Facebook to take their social data. If they,
 15 as well as others, did, Facebook would become a central exchange for data collected among competitors.
 16 That is, competitors would share the data to Facebook and Facebook would then share that data back to
 17 the competitors that participated in the scheme. ***Facebook would become a data-passthrough***
mechanism.

18 148. In December 2012, despite recognizing that API access, particularly when bundled with
 19 Facebook's NEKO advertising platform, was profitable, Facebook decided not to charge for API access
 20 and began full implementation of Zuckerberg's decision.

21 149. Although Facebook had planned to announce its decision not to allow access to Friends
 22 data through its Friends and News Feed APIs in a public blog post, Zuckerberg vetoed that decision in
 23 December 2012. Instead, Zuckerberg decided to enforce the decision selectively and covertly after
 24 deliberately analyzing Facebook's competitors. Some competitors would be blocked entirely from the
 25 APIs, while some select few would be blocked only if they did not provide their own social data to
 26 Facebook.

C. Facebook Targets Its Competitors for Reciprocity or Denial of API Access

150. Beginning in January 2013, Facebook began an internal audit of all of the applications that relied on its Platform. It immediately identified competitors to shutdown entirely from accessing Facebook's APIs or advertising platform. Specifically, Zuckerberg ordered that WeChat, Kakao, and Line be restricted from using the Friends and News Feed APIs and even from advertising on Facebook's NEKO and other platforms.

151. Facebook's David Fischer balked at the decision, noting that blocking competitors even from the advertising platform was irrational and unworkable:

I continue to believe we should allow ads from competitors for several reasons: We should be secure enough in the quality of our products to enable them to compete effectively in the open marketplace It looks weak to be so defensive. This will be a challenge to enforce. We have many competitors and the list will grow in time. How will we judge retailers and e-commerce sites as we grow Gifts, since they arguably are competitors too?

152. Fischer was right. The decision made no rational economic or business sense. The sole purpose of refusing to sell social data as part of the Facebook Platform or through advertising was to shut out competition and allow Facebook to dominate the Social Advertising Market. Aside from that anticompetitive purpose, the decision to refuse to sell social data or advertisements even at full price was so facially irrational that Facebook's own employees who may not have been fully privy to the anticompetitive scheme protested at the irrationality of the decision.

153. That same month Facebook’s Osofsky pleaded with Vernal to make an announcement that would send a clear signal to developers, but Vernal responded that Zuckerberg had already rejected that approach. As Vernal explained, telling developers about the decision means bearing the “very real cost” of “changing the rules,” including the “PR cost” of betraying developers that Facebook had induced to build for Facebook’s APIs and Platform.

154. That same month, Facebook continued to implement Zuckerberg's decision to blacklist competitors. He ordered that Facebook competitor Vine be "shut down" from Facebook's API and Platform, including from advertising. Facebook had again sacrificed the profits it would glean from

1 increased engagement and advertising revenue as a result of Vine's use of Facebook's Platform in
 2 exchange for the exclusion of Vine from the competitive landscape.

3 155. Indeed, Facebook's mobile advertising platform was growing rapidly, and blocking large
 4 companies from using it made no economic sense other than to effectuate Zuckerberg's scheme to prevent
 5 rivals from competing with Facebook. In a January 20, 2013 email, Facebook's then-Director of Product
 6 Management and Platform Monetization team, Deborah Liu reported: "Neko grew another 50% this
 7 week! Hit a high of \$725k Friday (see charge below). We are now 5% of total Ads revenue and 21% of
 8 mobile ads revenue."

9 156. Lessin responded to the news: "The neko growth is just freaking awesome. Completely
 10 exceeding my expectations re what is possible re ramping up paid products."

11 157. Liu was clear, however, that the increased revenues occurred notwithstanding the
 12 blacklisting of formerly large spenders, such as WeChat: "WeChat and other competitive networks are
 13 no longer advertising on Neko based on policy."

14 158. In February of 2013, Facebook shut down Yahoo's access to key APIs, resulting in direct
 15 negotiations between Yahoo's Marissa Mayer and Facebook's Sheryl Sandberg in order to restore
 16 Yahoo's access to the Facebook Platform.

17 159. In March 2013, Facebook's key Platform employees began to voice concern that the
 18 approach taken by Facebook of shutting down access and then coercing "data reciprocity" was
 19 problematic. They instead encouraged making an upfront announcement that the APIs would be
 20 unavailable and then negotiating a deal for access to Facebook's Platform. In an e-mail that month from
 21 Purdy to other Facebook employees and executives, he wrote:

22 I have been thinking about the challenges around reciprocity and
 23 competitive enforcement (friends.get, etc.) and fact that ***it is all post facto***.
 24 The way we are structured today, you build an app on FB and then launch
 25 and then we may just shut you down, harming users and the developer. I
 26 wonder if we should move as quickly as possible to a model in product
 27 where all you get from platform is login (basic info) and sharing without
 28 approval. All other APIs are available in development, but have to be
 approved before the app launches to real users (basically all apps using
 friends.get have to have that capability approved). We are roughly on

1 course to deliver this as part of unified review, save for the more granular
 2 approval for things like friends.get? What I love about this too is we could
 3 make our whitelists so much cleaner by making each capability an approval
 4 thing. Marie: I think makes your “deprecations” much easier. Thoughts?

5 160. Although Facebook moved towards full deprecation of the APIs with the exception of
 6 those with whitelisting agreements, it continued its campaign of quietly shutting down competitors’
 7 access to the APIs and then asking them to make a reciprocity deal. Indeed, Facebook soon thereafter
 8 shut down three competing Amazon apps, resulting in Amazon protesting that the decision “will break 3
 9 of our live integrations.”

10 161. That same March in 2013, Facebook used API and Platform access as leverage to acquire
 11 rival Refresh.io. Facebook internally decided that it would threaten Refresh.io with denial of access to
 12 the APIs unless it sold its business to Facebook. That same form of leverage would be used to acquire
 13 other rivals—either they sold to Facebook or they saw their business ejected from Facebook’s Platform.

14 162. In 2013, Facebook also began using mobile spyware company Onavo to secretly track
 15 application usage on customers’ phones. Onavo, through deceptive terms of service, tracked app usage
 16 in real time, and Facebook used that data to target specific competitors. By April 2013, Olivan was using
 17 Onavo to track Snapchat, Pinterest, WhatsApp, Tumblr, Foursquare, Google, Path, vine, Kik, Voxer,
 18 MessageMe, Viber, GroupMe, Skype, Line, and Tango. One internal Olivan presentation contained
 19 detailed usage data for these applications from August 2012 to March 2013.

20 163. By July 2013, Onavo data was providing detailed intelligence to Facebook on 30 million
 21 Onavo users. Among all of the apps, the data showed the meteoric rise of WhatsApp, a direct competitor
 22 to Facebook’s own fledgling product, Messenger.

23 164. Armed with detailed intelligence about its competitors—both on and off the Facebook
 24 Platform—Facebook ordered a detailed audit of Facebook applications that relied on the Friends and
 25 News Feed APIs.

26 165. Facebook’s Director of Developer Platforms & Programs, Konstantinos Papamiltiadis,
 27 reported back that there were 40,000 apps using the APIs that were to be restricted, with 7% of them
 28 being photo or video sharing apps.

1 166. Facebook then began to categorize these third-party applications into three general
 2 categories: (1) developers that “may cause negative press” if their access to APIs were shut down; (2)
 3 applications that “provide strategic value”; and (3) applications that were “competitive” or “not useful to
 4 FB. Application developers that would experience “a Major Business Disruption/Kill” as a result of the
 5 restriction of API access received a “PR flag.”

6 167. In response to the categorization, Lessin immediately ordered his subordinates to “shut
 7 down access to friends on lifestyle apps . . . because *we are ultimately competitive with all of them.*”
 8 (emphasis added).

9 168. As Facebook continued its analysis of the applications that relied on the Friends and News
 10 Feed APIs, it became clear that Facebook’s plan would result in the deprecation of the “majority of the
 11 API surface”—namely, the APIs that were the most essential parts of the Facebook Platform.

12 **D. The Decision to Remove Developer Access to the Friends, News Feed and Other
 13 Crucial APIs Lacked Any Legitimate Justification**

14 169. The engineers tasked with implementing Zuckerberg’s decision to restrict access to the
 15 APIs were baffled. The decision made no technical sense whatsoever. Indeed, there was no justification
 16 for it other than to squelch competitors who threatened Facebook’s dominant position and SDBE.

17 170. As Facebook engineer, David Poll, had written to all Platform Engineers earlier in 2011,
 18 the decision would mean gutting the Facebook Platform of functionality used—and needed—by some of
 19 the most important mobile apps built on Facebook’s Platform:

20 I was thinking about the Platform 3.0 friend list change a bit as I was using
 21 my Android phone tonight and realized that two of the apps that most
 22 impact my day-to-day mobile experience will be completely, irrevocably
 23 broken by this change . . . In both of these cases, the apps are adding real
 24 value to my experience, and in both of those cases, I have zero expectation
 25 that any of my friends will be using the app. The fundamental problem I’m
 26 having with this change is that my friend list is my information—it’s part
 27 of who I am, and for Facebook to shut down this access primarily comes
 28 across to me as FB intruding upon and shutting down my own access to my
 own information.

29 171. Poll concluded, “No matter how you slice it, this change is going to have a significant
 30 negative impact on my day-to-day smartphone experience.”

1 172. Poll was correct. The change meant breaking applications that added significant value to
 2 Facebook's network and increased valuable user engagement on Facebook's core product. The decision
 3 to deliberately break these applications had only one plausible purpose—to strengthen the SDBE and to
 4 ensure that competitors could not create rival social networks that could compete with Facebook.

5 173. That proposition was entirely obvious to those responsible for Facebook's Platform. In an
 6 August 2013 e-mail, senior Platform engineer Bryan Klimt wrote to Ilya Sukhar, Facebook's Head of
 7 Developer Products and Senior Engineer working on its APIs, and others working on Facebook's
 8 Platform, stating that the reason for the decision to block access to the Friends and News Feed APIs was
 9 to exclude competitors and that all other reasons were simply false and pretextual. To begin with, Klimt
 10 was clear that the removal of the APIs was "ridiculous" because they were so essential to the Facebook
 11 Platform:

12 I'm trying to write a post about how bad an idea it would be to remove the
 13 api that lets you get a list of user's friends from Facebook Platform. In order
 14 to illustrate my point, I'd like to satirically suggest removing some API that
 15 is so core to the developer experience and that removing it would be
 16 ridiculous on its face. For example, removing the Windows API method
 17 that lets you create a new window. Or removing the Twilio API method
 18 that lets you send a text message. Both suggestions are utterly insane. The
 19 problem is, for Facebook Platform, removing the method to let you get a
 20 list of friends literally is already that ridiculous. I can't think of an example
 21 more ridiculous to parody it with.

22 174. Klimt then dispelled any notion that the APIs were being removed for any technical or
 23 functionality-driven reason:

24 Before we discuss in more detail, I'd like to clear up some misconceptions
 25 about the deprecations. I've heard some rumors floating around about why
 26 we are doing this. But many of them are clearly pabulum designed to make
 27 engineers think this decision has solid technical reasons. It does not. 1/ This
 28 API can be abused so we can remove it. False. That is a non-sequitur. Lots
 of APIs can be abused. Our whole product can be abused. That's why we
 have one of the best teams in the industry at detecting and stemming abuse.
 That team, plus Unified Review, is more than sufficient to deal with any
 theoretical abuse coming from this API. Even if this were true, who wants
 to be in that classroom where the whole class is punished for transgressions
 of a few?

1 175. Klimt also was clear that the APIs were not being removed in favor of new or different
 2 APIs providing the same features:

3 2/ It's okay to remove because we've provided alternatives for common
 4 uses. False. If you think that's true, then I don't think you realize why
 5 developer platforms exist. If we wanted to limit Facebook to the set of use
 6 cases we've already imagined, we could just do that ourselves, and not even
 7 have a Platform. The purpose of a Platform is to let people build new things
 8 on top of it. It's to enable the whole universe of ideas that anyone in the
 9 world could think of. Developers out there will have all sorts of crazy ideas.
 10 We want them to build those crazy ideas on top of Facebook. Do you know
 11 why Facebook was originally built for the WWW instead of being part of
 12 CompuServe or AOL's proprietary networks? It's because the web is an
 13 open and extensible platform. It lets developers make their craziest become
 14 reality.

15 176. Klimt then explained that the real reason was to hurt Facebook's competitors and prevent
 16 them from competing with Facebook:

17 So, if neither of those reasons explains why we are doing this, what's
 18 driving it? The only reason I've heard that makes sense is that we are
 19 worried about people "stealing the graph", ***we are doing this as a***
protectionist grab to make sure no one else can make a competing social
network by bootstrapping with our social graph. Okay, so let's assume for
 20 a minute that the social graph does belong to us, and not to our users. And
 21 let's even go so far as to assume that this is a real problem, although, I'm
 22 not convinced it is. I mean, concerns that other companies will steal our
 23 friend graph may just be paranoia. But for the sake of argument, let's say
 24 it's not. Then what? ***We're removing the core API in our developer***
platform. Out of concerns that someone will steal our social network
product. That sends a clear message to developers: Facebook Platform
 25 comes second to Facebook the Social Network Product. This has been a
 26 criticism all along with our Platform. When you go read the blog posts
 27 critical of our Platform, they all hit on this same point. When our APIs are
 28 subjugated to the whims of our other products, they can't be stable. And an
 unstable platform isn't really a platform at all. So then you are left with 2
 big problems. 1/ How do you convince external developers to build on a
 platform where the most basic core APIs may be removed at any time? I
 mean, the only big value we bring to the table right now is in distribution
 and discovery, and that's going to encourage developers to do only the
 most superficial integration with Facebook. Basically, they're going to do
 just enough to be able to use Neko ads. 2/ How do you convince internal
 developers to work on Platform knowing it's only ever going to play
 second fiddle to the rest of the company? I mean why should any of us
 work on a product that could be crippled at any time to benefit another

1 team? If I worked on Platform, I would be seriously reconsidering my
 2 options if this API gets deprecated.

3 (emphasis added).

4 177. Klimt was clear—the decision to remove the APIs lacked any technical or business
 5 justification other than to prevent a competitor from creating a competing social network, eroding the
 6 SDBE protecting Facebook’s business. Any proffered justification by anyone at Facebook to the contrary
 7 was entirely pretextual.

8 178. Moreover, the decision to remove the APIs permanently destroyed the value of
 9 Facebook’s Platform. If developers could not trust Facebook to maintain the APIs as stable parts of its
 10 Platform, they would not risk writing apps for the Platform in the future. The decision meant scuttling
 11 Facebook’s valuable Platform for the ability to prevent a rival social network from taking hold.

12 179. Sukhar responded to Klimt, noting that he agreed and that he “talks about this every single
 13 meeting.” His pleas to Vernal, Purdy and Zuckerberg to reverse their decision fell on deaf ears. The
 14 decision had been made and Klimt and Sukhar would have to implement it.

15 180. Facebook continued its audit of apps that relied on the APIs. Most of the Apps were
 16 important to the Facebook ecosystem. Indeed, Facebook acknowledged they “are not spammy or crap,
 17 but apps users like a lot.” Nonetheless, Facebook’s Papamiltiadis concluded that, among others, apps like
 18 Sunrise, Yahoo, IFTT, Friendcaster, MyLife, Sync.me, YouTube, Contacts+, and Bitly “overlap with
 19 Facebook products” and “could compromise our success in those areas.”

20 181. Facebook’s careful monitoring of competitive apps continued well into 2013, and given
 21 its heavy reliance on data secretly collected by Onavo, Facebook purchased Onavo on October 14, 2013.
 22 Facebook used that data to determine which apps competed with its social network and thus posed a threat
 23 to the SDBE. It then targeted those companies for withdrawal of API access and coerced data reciprocity
 24 agreements.

25 182. In October 2013, Facebook’s Purdy reported that Facebook was dividing apps into “three
 26 buckets: existing competitors, possible future competitors, developers that we have alignment with on
 27 business model.” Facebook’s Eddie O’Neil believed that the “separation between those categories doesn’t
 28

1 feel clean" and that the overlap was problematic. As O'Neil observed, "apps can transition from aligned
 2 to competitive and will ultimately make us sad that we leaked a bunch of data to them when they were
 3 aligned."

4 183. Sukhar objected to the entire exercise, noting that he had been speaking to many dozens
 5 of developers "who will get totally fucked by this and it won't even be for the right reason." Sukhar
 6 explained that his "engineers think **this plan is insane** and I'm not going to support an all hands [meeting]
 7 to convince them otherwise." (emphasis added).

8 184. As Sukhar noted, the decision to withdraw the Friends and News Feed APIs from the
 9 Platform made no technical sense whatsoever, and Sukhar could not bring himself to tell his engineers—
 10 who saw through the ruse—otherwise. It was obvious that Facebook was seeking to squelch potential
 11 competition—namely, by preventing user growth and engagement for competitive apps. As one Facebook
 12 engineer commented about the obvious purpose of the plan to remove the APIs: "I understand we want
 13 to make it hard for a developer to grow a new app."

14 185. The review of apps continued and specific decisions with respect to certain highly
 15 sensitive competitors were escalated to Mark Zuckerberg. As one internal Facebook e-mail explained:

16 We maintain a small list of strategic competitors that Mark personally
 17 reviewed. Apps produced by the companies on the list are subject to a
 18 number of restrictions outlined below. Any usage beyond that specified is
 not permitted without Mark level signoff.

19 186. In December 2013, Klimt complained to Sukhar about the audit and categorization
 20 process:

21 So we are literally going to group apps into buckets based on how scared
 22 we are of them and give them different APIs? How do we ever hope to
 23 document this? Put a link at the top of the page that says "Going to be
 building a messenger app? Click here to filter out the APIs we won't let
 24 you use!"

25 And what if an app adds a feature that moves them from 2 to 1. Shit just
 26 breaks? And messaging app can't use Facebook login? So the message is,
 "if you're going to compete with us at all, make sure you don't integrate
 with us at all."? I am just dumbfounded.

187. As Poll recognized in response to Klimt's complaint, the changes to Facebook's Platform were "more than complicated, it's sort of unethical." Klimt agreed with the assessment, noting that the API removal "feels unethical somehow . . . It just makes me feel like a bad person."

E. Facebook Prepares to Announce Removal of the APIs

188. Zuckerberg decided to announce the API removal under the cover of a major change to the Facebook Platform, codenamed PS12N, which would be announced at the next Facebook F8 Developer Conference. Facebook's engineers were accordingly instructed in September 2013 to bury the changes to the API and announce them quietly along with the changes that would be announced at the conference.

189. In the run-up to its API withdrawal announcement, Facebook continued its audit of applications on its platform that were using the APIs. During that process Facebook continued to classify potential competitors, including LinkedIn and AirBnB, as companies that would be denied access with no whitelist exception.

190. Although Facebook knew that the APIs were going to be removed by the next F8 conference, it continued to tell developers to rely on them. As a Facebook Platform evangelist noted about one particular document frequently shared with developers, “the language in here around friend permissions is very counter to our upcoming platform simplification efforts” and “feels against the spirit of where we are headed.”

191. That was, however, precisely what Facebook wanted—to continue to entice developers to build their software and their businesses on APIs that made them dependent on Facebook. The use of the APIs meant that competitors could be abruptly shut out of the market, useful apps could be extorted for valuable social data, and the rest could simply be destroyed.

192. By October 2013, Facebook required certain application developers it chose to whitelist to sign Private Extended API Agreements, which obligated them to purchase large amounts of advertising or to provide their own valuable social data to Facebook in exchange for continued access. That month, for example, Facebook whitelisted Royal Bank of Canada's application in exchange for the purchase of social data through Facebook's NEKO advertising platform.

1 193. Facebook catalogued and tracked developers on its platform that would likely complain
 2 about the decision, creating negative press. Facebook's internal employees tasked with crafting a PR
 3 message explained the undertaking in a December 2013 e-mail:

4 In prep for Platform Simplification, we're putting together a list of
 5 developers who we think could be noisy and negative in press about the
 6 changes we're making: Primarily we think it will be a list of the usual
 7 suspects from past policy enforcements. We'd love to pull from your
 8 historic knowledge on the topic. Is there anybody you'd add to the list
 9 below? We're going to build plans around how we manage and
 communicate with each of these developers. There are also comms plans
 in the works for working with developers who are high ad spenders and
 friends of Mark/Sheryl."

10 194. Facebook planned to manage its message carefully, as its decision likely would alienate
 11 even those developers who were making large purchases of social data from Facebook through ads and/or
 12 who were friends of Facebook's two most senior executives, Zuckerberg and Sandberg. Those developers
 13 were identified and the message to them was carefully crafted to avoid a PR disaster. For most application
 14 developers, however, the decision would result in the complete exclusion of their applications from
 15 Facebook's ecosystem—which would likely be fatal to their businesses.

16 195. Facebook targeted potentially "noisy" or "negative" developers individually, including,
 17 but not limited to, the following applications and developers: iLike, Rock You, Zynga, Path, Flipboard,
 18 Slide, Social, Fixer, SocialCam, Viddy, BranchOut, Vince, Voxer, Message Me, Lulu, Anil Dash, Super
 19 Cell, Kabam, Washington Post, Guardian, The Wall Street Journal, Jason Calacanis, Cir.cl, Bang with
 20 Friends, Tinder, Social Roulette, App Wonder, Ark, Vintage Camera, and Girls Around Me.

21 196. Facebook also used call-log data secretly collected by Android users to target developers
 22 and applications to be shut down.

23 197. The entire process led Facebook engineer George Lee to lament:

24 We sold developers a bill of goods around implicit OG [Open Graph] 2
 25 years ago and have been telling them ever since that one of the best things
 26 they could do is to a/b/ test and optimize the content and creative. Now that
 27 we have successes. . . . We're talking about taking it
 away . . . [Developers] have invested a lot of time to establish that traffic
 in our system . . . The more I think about this, the more concern I have

1 over the pile of asks were [sic] making of our developers this year. PS12N
 2 is going to require them to alter how they deal with APIs (and for limited
 3 value).

4 198. Thus, as Facebook continued to prepare its API withdrawal announcement, Facebook's
 5 own executives recognized that Platform developers had been conned into relying on Facebook's APIs.
 6 Facebook knew full well that it intended to remove the APIs, but it allowed and encouraged developers
 7 to build entire businesses on and around them. As Lee put it, they were sold a "bill of goods."

8 199. By 2014, it was clear that with the exception of a few apps and developers, most would
 9 be denied access entirely to the Friend and News Feed APIs.

10 200. In January 2014, Zuckerberg debated denying API access to dating apps. Facebook
 11 decided that it would whitelist Tinder and other anointed dating apps and shut down the rest, clearing the
 12 way for the selected apps to dominate the dating market. Zuckerberg reasoned that although Facebook
 13 would ultimately create its own dating app, it would let Tinder and a select few others to survive until
 Facebook's competing app was ready:

14 I've been thinking a lot about Tinder and other people recommendation
 15 apps since about 10% of people in many countries are using a Tinder now.
 16 People recommendations seems like something that should be right up our
 17 alley, but it's currently something we're not very good at. Tinder's growth
 18 is especially alarming to me because their product is built completely on
 Facebook data, and it's much better than anything we've built for
 recommendations using the same corpus . . . I think this is a big and
 important space and it's something we should have a team working on—
 probably to develop people recommendation Hunch sections for now.

19 201. Zuckerberg became increasingly involved in assessing whether individual apps would be
 20 whitelisted when the APIs were removed. Facebook's senior-most executives accordingly prepared
 21 recommendations for his consideration. In a January 2014 presentation entitled, "Slides for Mark," for
 22 example, Facebook employees summarized the results of the ongoing app audit. The presentation
 23 observed that the changes would make it "impossible to build" an app without a whitelist agreement with
 24 Facebook. The presentation made special recommendations for apps that purchased large amounts of
 25 social data through Facebook's NEKO platform or whose developers were friends with Zuckerberg or
 26

1 Sandberg. The bulk of the 41,191 apps that relied on the Friends or News Feed APIs, however, would be
 2 shut out and, as a result, completely destroyed.

3 202. Although the effect on these apps was clear, Facebook continued to evangelize the APIs
 4 to developers. In January 2014, Facebook's George Lee sounded the alarm to Purdy and Vernal, which
 5 fell on willfully deaf ears:

6 [P]artner managers are still selling products that we ask them to sell, so
 7 when it comes to feed integration, we're still telling people to use [Open
 8 Graph]. The last f8 was all about implicit [Open Graph], so while we may
 9 have decided amongst ourselves that this is no longer the future without an
 10 alternative we don't have anything to tell current [developers] (so partners
 11 continue to tell them to use [Open Graph] and they continue to integrate
 12 it).

13 203. The plan to quietly take away the APIs in favor of a new crippled developer platform was
 14 called the "switcharoo plan" by Facebook's engineers. It was clear to all involved that the announcement
 15 of the changes to the platform at the upcoming F8 conference was cover for the radical changes Facebook
 16 planned to make to its platform—namely, the removal of the Friends and News Feed APIs.

17 204. During March 2014, Facebook's engineers and employees continued to be baffled by the
 18 upcoming decision. As one employee noted:

19 It seems a bit odd that we block other developers from doing things on our
 20 platform that we're ok with doing ourselves. Do we consider ourselves
 21 exempted? That seems a little unfair especially when our stance on some
 22 of these policies is that they're about ensuring trusts and a great experience.
 23 My mental model on how platform is a level playing field could be way off
 24 though.

25 205. The decision made no sense to Facebook's own employees, particularly because Facebook
 26 itself needed the APIs to make their own competing applications, including Facebook's Messenger
 27 application. Facebook's executives ignored all of the concerns raised by their employees, including their
 28 API engineers, and continued to drive towards the announcement of the removal of the APIs at F8.

29 206. The real reason for the removal of the APIs was kept tightly under wraps. In April 2014,
 30 right before the announcement, Vernal warned Sukhar that if any mention was made of the competitive
 31

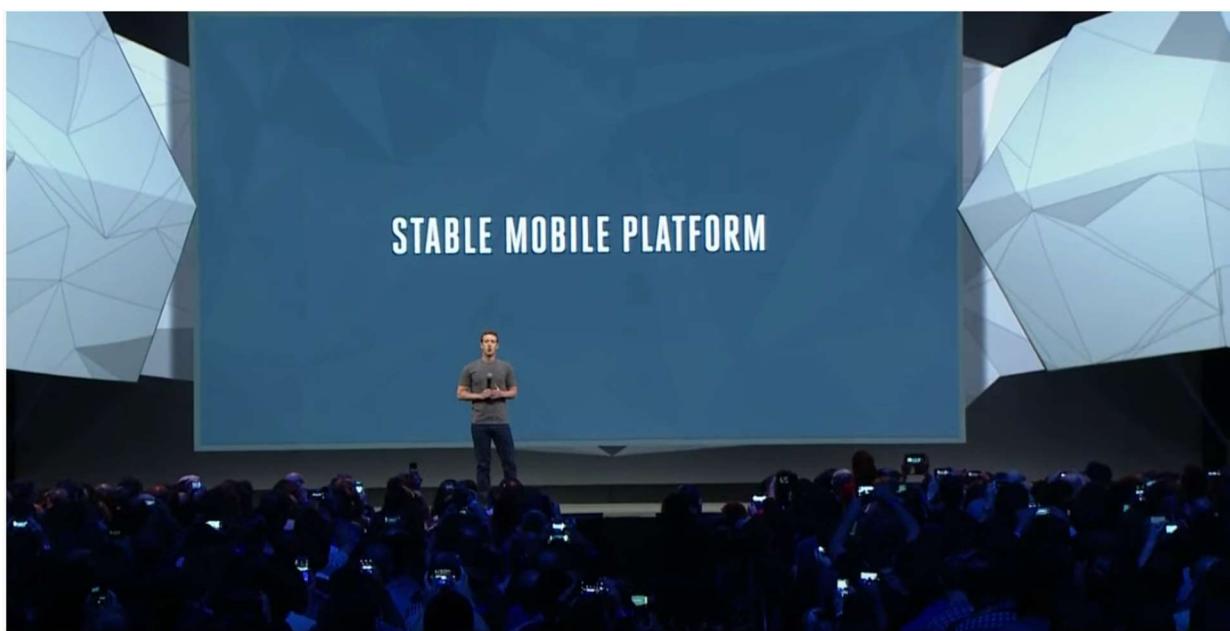
1 reasons for the removal of the APIs (as Sukhar wanted), there would be a “high likelihood of breaking
 2 into jail.”

3 **F. The Announcement at F8**

4 207. On April 30, 2014, Facebook announced “The New Facebook Login and Graph API 2.0”
 5 on Facebook’s website. Facebook heralded changes to its new Login system for several pages. Buried in
 6 the announcement was a quiet statement about the Platform’s most important APIs—the Friend and News
 7 Feed APIs: “In addition to the above, we are removing several rarely used API endpoints; visit our
 8 changelog for details.”

9 208. These APIs were not *rarely used* at all. Tens of thousands of third-party apps were actively
 10 using and building on the APIs. Internal Facebook engineers likened them to essential APIs in Microsoft’s
 11 Windows and were outraged at the removal. Five of the top ten Facebook Apps surveyed in December
 12 2012 relied heavily on them. The announcement was entirely false and was deliberately buried beneath
 13 other API announcements to avoid drawing attention to the competition-crippling effect of the decision.
 14 In fact, today, the changelog referred to in the announcement is no longer accessible on Facebook’s page
 15 even though years of other changes are.

16 209. When Mark Zuckerberg took the stage at F8 days later for his keynote speech, there was
 17 no mention of the removed APIs. Instead, Zuckerberg emphasized the “stability” of Facebook’s mobile



1 platform just as Facebook quietly removed some of the most heavily relied-upon and necessary APIs in
 2 Facebook's Platform.

3 210. At the twenty developer sessions preceding the announcement, not one mention was made
 4 of the API removal or that the upcoming changes would simply break nearly all of the more than 40,000
 5 third-party apps that relied on the APIs. After April 30, 2015, the APIs were no longer part of any
 6 available version of Facebook's Platform.

7 211. Facebook thus had successfully destroyed any application that could possibly create a
 8 product that could threaten the SDBE that protected Facebook's dominant position and market power. A
 9 select few would be required to hand over their most valuable resource—their social data—to their
 10 behemoth competitor in exchange for continued access.

11 VI. THE WHITELIST AND DATA SHARING AGREEMENTS

12 212. After the announcement and through the full removal of the APIs in April 2015, Facebook
 13 continued to make a series of agreements that forced certain competitors to hand their data over to
 14 Facebook. For example, Facebook forced certain third-party developers that it identified as competitive
 15 threats with valuable social data to sign Private Extended API agreements—referred to throughout this
 16 Complaint as “Whitelist and Data Sharing Agreements” or simply “the Agreements”—in order to obtain
 17 access to the Friends and/or News Feed APIs.

18 213. Facebook's Whitelist and Data Sharing Agreements, as of January 2015, included a
 19 provision that acknowledged that the APIs they covered are not available to the general public. An exhibit
 20 to each Whitelist and Data Sharing Agreement listed the specific Facebook APIs to which a particular
 21 developer was being granted access.

22 214. These Agreements were only offered in exchange for massive purchases of Facebook's
 23 social data through mobile advertising and/or through the provision of the developer's own social data
 24 back to Facebook (so-called “reciprocity”).

25 215. As Facebook executives and engineers understood and acknowledged in internal
 26 communications, this scheme allowed Facebook to serve as a “data pass-through” among competitors.
 27
 28

1 Competitors with Whitelist and Data Sharing Agreements provided social data to Facebook, which sold
 2 data obtained from one competitor to another whitelisted competitor.

3 216. If a developer refused to participate in the scheme, it was excluded entirely from
 4 Facebook's Platform because the most important APIs—the Friends and News Feed APIs—would not
 5 be available to it.

6 217. In January 2015, Facebook provided Whitelist and Data Sharing Agreements to the dating
 7 apps Tinder and Hinge, because of the value of the social data those applications produced.

8 218. In February 2015, when Airbiquity (another third-party developer) sought a Whitelist and
 9 Data Sharing Agreement, Facebook lied to them, telling Airbiquity that the specified APIs “won’t be
 10 available to anyone” after April 30, 2015, and that “all similar integrations will be subject to the same
 11 deprecations/restrictions.”

12 219. That same month (February 2015), Facebook secretly signed Whitelist and Data Sharing
 13 agreements with other third-party developers, including Netflix, Nissan, and Lyft.

14 220. In April 2015, Facebook’s manager of strategic partnerships, Ime Archibong, internally
 15 celebrated the fruition of Facebook’s three-year plan to eliminate its competition through Platform
 16 changes: “Three years coming, but the ‘Platform Simplification’ initiative finally lands this week.”

17 221. Also in April 2015—as Facebook finally cut off all public access to the Friends and News
 18 Feed APIs—Facebook continued to receive requests for Whitelist and Data Sharing Agreements from
 19 companies such as Microsoft, Hootsuite, and Walgreens.

20 222. Facebook had already extracted valuable social data from dozens of competitors, including
 21 Foursquare and Pinterest, in the run-up to the announcement and ultimate removal of the APIs. Without
 22 discovery, the precise number and identity of those who entered into Whitelist and Data Sharing
 23 Agreements with Facebook cannot be known for certain, but publicly available information indicates that
 24 dozens of app developers entered into such Agreements with Facebook.

25 223. Absent the Agreements and Facebook’s overall anticompetitive scheme to exclude third-
 26 party developers, other companies could have created their own social data through the proliferation of
 27 their own competing social networks. The engagement on their competing networks and the social data

1 generated from that engagement would have increased the value of their networks because of network
 2 effects. As the amount of social data generated and monetized on these competing networks increased,
 3 Facebook's SDBE would erode, potentially driving more users to new platforms.

4 224. None of that could happen as long as Facebook could coercively demand all of the
 5 valuable social data generated on any competing platform. The Whitelist and Data Sharing Agreements
 6 ensured that competitive threats such as Foursquare could not accumulate enough social data to create
 7 their own feedback loop in—and perhaps come to dominate, through network effects—any market in
 8 which Facebook anticipated competing or actually competed.

9 225. The Agreements also ensured that Facebook's decision to destroy forty thousand
 10 applications built on the Friends and News Feed APIs would be effective—and remain so. If Facebook
 11 did not control the supply and sale of social data, excluded developers could simply build their
 12 applications on another platform. But by entering into a network of Whitelist and Data Sharing
 13 agreements, Facebook ensured that no such competing platform could arise. The Agreements
 14 strengthened and preserved the SDBE and/or prevented the proliferation of rival generators of social data
 15 and third-party developer platforms.

16 226. In a world where no such Agreements existed, a rival such as Pinterest or Foursquare
 17 would obtain more engaged users, resulting in more social data that those competitors could monetize
 18 through their third-party or advertising platforms. The thousands of developers denied access to
 19 Facebook's Platform would therefore build their applications on Foursquare or Pinterest instead of simply
 20 going out of business or changing their products/businesses dramatically to survive. By forcing those and
 21 other similarly situated companies to hand over their social data, Facebook made sure its Platform would
 22 be the only viable platform upon which a third-party social application could be built.

23 227. As explained in the next section, the only remaining threat to Facebook's Social
 24 Advertising dominance was from a completely independent competitor that did not rely on Facebook's
 25 Platform, and thus could not be extorted into handing over its data in exchange for API access. For such
 26 companies, Facebook would pay any price to remove them from the market—and use their assets to
 27 strengthen Facebook's SDBE.

1 228. But first, Facebook had to identify such threats to its market dominance. Enter Onavo.

2 **VII. THE SURVEILLANCE AND ACQUISITION OF COMPETITIVE THREATS**

3 229. To ensure that its scheme to maintain and expand its market power would work, Facebook
 4 had to control an important source of competition: independent social networks and producers of social
 5 data. Although Facebook could simply destroy any competition that relied on its Platform by denying
 6 access to essential APIs, this would do nothing to stop a competitor that was growing its network of
 7 engaged users entirely independent of Facebook.

8 230. To detect such threats before they became too formidable, Facebook sought a way to
 9 covertly surveil millions of mobile users to determine what applications they were using, and how. Mobile
 10 applications were particularly important—and concerning—to Facebook, as desktop engagement was
 11 shrinking while mobile apps rapidly proliferated. By 2012, it was clear to Zuckerberg and to Facebook
 12 that any threat to its dominance would come from a mobile application. As explained in this section,
 13 Facebook used mobile spyware on an unprecedented scale to surveil, identify, and eventually remove
 14 from the market through acquisition competitors that independently threatened Facebook's dominance
 15 and/or the SDBE protecting its monopoly, market power and business.

16 **A. Facebook Relies on Onavo's Surveillance of Facebook's Competitors, and
 17 Acquires and Uses Onavo's Assets**

18 231. Onavo was an Israeli mobile web analytics company founded by Roi Tiger and Guy Rosen
 19 in 2010. The company designed spyware designed to surveil users as they used their mobile devices. To
 20 obtain extensive information on a user's usage of mobile applications and of bandwidth, Onavo cloaked
 21 its spyware in virtual private networks ("VPNs"), data compression, and even in mobile privacy apps.

22 232. Onavo sold the mobile usage data it collected to Facebook, which in turn used the real-
 23 time information it received from Onavo to determine which mobile applications posed a threat to
 24 Facebook's dominance and to the SDBE protecting Facebook from new entrants and competition.
 25 Facebook used Onavo data to: (a) identify and target competitors from which Facebook could demand
 26 Whitelist and Data Sharing Agreements; (b) identify and target competitors to whom Facebook would

1 completely deny Platform access; and (c) identify and target competitors that Facebook would remove
 2 from the competitive landscape entirely through acquisition.

3 233. Facebook received Onavo information in real time, which included the two most important
 4 metrics for competing mobile applications—their reach and engagement. Reach measures the size of an
 5 application’s user base, and “engagement” measures the extent to which users actively engage with the
 6 application. An application with high reach but low engagement cannot generate the sort of social data
 7 that Facebook needs to feed its advertising platform with actionable targeting data. Conversely, an
 8 application with high engagement but low reach doesn’t generate social data from enough people to
 9 attract a broad base of advertisers. The greatest threat to Facebook’s business would come from an
 10 application that exhibited strong reach and strong engagement—and especially one that showed rapid
 11 growth in both metrics, indicating the development of network effects.

12 234. As the potential threat to its market dominance from mobile applications continued to
 13 grow, Facebook sought to obtain exclusive control over Onavo’s surveillance data—and over its mobile
 14 spyware code and installed base. On October 13, 2013, Facebook acquired Onavo.

15 235. On its blog, Onavo’s CEO Guy Rosen and CTO Roi Tiger, announced that Onavo would
 16 continue as a standalone brand: “When the transaction closes, we plan to continue running the Onavo
 17 mobile utility apps as a standalone brand. As always, we remain committed to the privacy of people who
 18 use our application and that commitment will not change.”

19 236. Facebook, however, had other plans. It immediately began integrating Onavo’s
 20 applications into both its business operations and its acquisition strategy. Facebook, for example, began
 21 analyzing data secretly collected from Onavo’s Protect software, which was a massive surveillance and
 22 data collection scheme disguised as VPN software. Billed as a way to “keep you and your data safe,”
 23 Onavo Protect in fact monitored all web and mobile application traffic on a user’s mobile device.

24 237. When an Onavo Protect user opened a mobile app or website, Onavo software secretly
 25 redirected the traffic to Facebook’s servers, where the action was logged in a massive database. Facebook
 26 product teams then analyzed the aggregated Onavo data to determine which apps and features people
 27 were using in real time, how frequently they used the apps, and for how long. If the data in an app was
 28

1 not encrypted, this information was as specific as (for example) the number of photos the average user
 2 likes or posts in a week in that app.

3 238. Based on a 2017 estimate, Onavo's mobile apps were downloaded an estimated twenty-
 4 four million times, and Facebook collected, compiled, and leveraged all of the collected data. By February
 5 2018, Onavo apps had been downloaded thirty-three million times across both iOS and Android.

6 239. As the former chief technologist for the Federal Trade Commission remarked to the press,
 7 Onavo was being leveraged against user interests to stifle competitive innovation:

8 Instead of converting data for the purpose of advertising, they're
 9 converting it to competitive intelligence . . . Essentially this approach
 10 takes data generated by consumers and uses it in ways that directly hurts
 their interests—for example, to impede competitive innovation.

11 240. Since 2011 and through the present, Onavo products have provided Facebook with real
 12 time data about mobile users on a breadth and scale not available through any other service or app. Using
 13 Onavo data, Facebook was able to determine which potential competitors it could target for its Whitelist
 14 and Data Sharing agreements; which competitors it could destroy by denying access to crucial APIs; and
 15 which competitors is needed to remove from the market through acquisition to preserve its monopoly
 16 position and SDBE.

17 241. Moreover, by monitoring potential threats, Facebook ensured that it had no blind spot—
 18 any application that posed a threat to its dominance was dealt with through anticompetitive and unlawful
 19 Whitelist and Data Sharing Agreements, destruction by denial of access to vital APIs on Facebook's
 20 platform, or by acquisition.

21 242. By acquiring Onavo, Facebook obtained exclusive access to the only real-time and high-
 22 quality source for mobile app user metrics at scale. Because of the acquisition of Onavo, Facebook
 23 strengthened the SDBE by ensuring that any threat to its dominance of the Social Advertising Market
 24 was dealt with at the earliest possible stage. Indeed, through Onavo, Facebook was able to (and did) track
 25 mobile app usage and trends essentially from launch. If a potential Facebook killer was on the rise,
 26 Facebook had a unique tool to identify it before anyone else could—and Facebook used it.

1 243. In the years after it acquired Onavo, Facebook continued to aggressively leverage the
 2 company's codebase in deceptively labeled apps that facilitated maximum surveillance and data
 3 collection of mobile users. For example, Facebook placed Onavo spyware in apps whose stated purposes
 4 required privileged access to user's mobile devices (in some cases, super-user privileges), allowing
 5 Facebook to gather data on virtually every aspect of a user's mobile device usage.

6 244. The abuses by Facebook were so flagrant that on August 22, 2018, Apple banned
 7 Facebook's Onavo app from its App Store. Apple ejected Facebook's app from its marketplace because
 8 it violated Apple's rules prohibiting apps from using data in ways far beyond what is required to run the
 9 app and provide advertising. In other words, because Onavo Protect was leveraging far more data than
 10 any VPN could conceivably need, it was clear that the true purpose of the app was to spy on Onavo users,
 11 and Apple would not allow it.

12 245. Indeed, the amount of surveillance was jaw-dropping. Facebook's Onavo Protect app
 13 reported on users' activities whether their screens were on or off; whether they used WiFi or cellular data;
 14 and even when the VPN was turned off. There was simply no rational relationship between the data
 15 collected and the purported purpose of the application. Put simply, a VPN that collected data even when
 16 the VPN was off was an obvious subterfuge for blatant spying on user behavior.

17 246. Undeterred, Facebook repackaged its Onavo spyware as a Facebook Research VPN app.
 18 Facebook sidestepped the App Store by rewarding teenagers and adults when they downloaded the
 19 Research app and gave it root—superuser—access to network traffic on their mobile devices. Facebook
 20 has been leveraging its Onavo code in similar ways since at least 2016, administering the program under
 21 the codename “Project Atlas”—a name suited to its goal of surveilling app usage on mobile devices in
 22 real time.

23 247. When the news broke in January 2019 that Facebook's Research apps were repackaged
 24 Onavo apps designed to spy on users, Facebook immediately withdrew the programs from the Apple App
 25 store.

26 248. Apple again concluded that Facebook had tried to violate its policies. Using Apple's
 27 Enterprise Developer Program, which allows the installation of a certificate or policy that provides root
 28

1 access to an iPhone or iPad, Facebook obtained a level of administrative privilege designed for a
2 company's internal IT department. Thus, using a system that allowed organizations to manage their
3 internal mobile devices, Facebook provided its spyware super user access to regular people's iPhones and
4 iPads. Apple balked at the abuse. An Apple spokesman stated:

5 We designed our Enterprise Developer Program solely for the internal
6 distribution of apps within an organization. Facebook has been using their
7 membership to distribute a data-collecting app to customers, which is a
8 clear breach of their agreement with Apple. Any developer using their
9 enterprise certificates to distribute apps to consumers will have their
certificates revoked, which is what we did in this case to protect our users
and their data.

10 249. U.S. Senator Mark Warner immediately called for new legislation to prevent the sort of
abuse which Facebook had engaged in. U.S. Senator Richard Blumenthal issued a fierce statement
11 rebuking Facebook's repackaging of the Onavo spyware app as "research": "Wiretapping teens is not
12 research, and it should never be permissible."

13 250. In addition to Onavo's Protect app, Facebook has attempted to deploy its surveillance
14 software as other forms of utility applications that require extensive or privileged access to mobile
15 devices. For example, Facebook released the Onavo Bolt app, which locked apps behind a passcode or
16 fingerprint while it covertly surveilled users—and sent Facebook the results. Facebook also shut that app
17 down the very day that its surveillance functionality was discovered. The Onavo Bolt app had been
18 installed approximately 10 million times.

19 251. Facebook continues to possess Onavo's code base and is likely, as it has done before, to
20 repackage its surveillance software into yet another app. Facebook can also easily incorporate
21 surveillance code into any of its mobile applications that enjoy massive installed bases and reach,
22 including Instagram and WhatsApp. Without deterrence or divestiture, Facebook will continue leveraging
23 the surveillance software, infrastructure, and analysis that it acquired as part of its acquisition of Onavo.

24 **B. Facebook Identifies Instagram as a Threat and Acquires the Company**

25 252. Data from Onavo reported a significant threat on the horizon likely as early as 2011 (and
certainly by 2012): a photo-sharing mobile application called Instagram. That app had its origins when

1 founder Kevin Systrom, then 27, learned to code over nights and weekends. Systrom developed an app
 2 called Burbn, which allowed users to check in, post plans and share photos. The photo sharing feature
 3 immediately became the app's most popular.

4 253. After meeting venture capitalists from Baseline Ventures and Andreessen Horowitz,
 5 Systrom received \$500,000 of funding. Systrom soon after met co-founder Mike Krieger—then 25 years
 6 old—who focused on the user experience of the app.

7 254. Seeing the positive reception to the photo sharing aspect of the Burbn app, Krieger and
 8 Systrom decided to pivot their business to focus on that feature. They studied their rivals in the category,
 9 including an app called Hipstamatic, which included photo-editing features, including the ability to add
 10 filters to photos. Hipstamatic, however, had no social capabilities.

11 255. Seeking to bridge the gap between Hipstamatic photo features and Facebook's elements,
 12 Systrom and Krieger stripped Burbn down to its photo, comment, and like capabilities. They then
 13 renamed the app Instagram, containing the words "instant" and "telegram."

14 256. Systrom and Krieger worked tirelessly to polish the user experience of their new
 15 application, designing Instagram to streamline the process of taking photos on mobile devices and
 16 uploading them to a social platform. The app had a minimalist focus, requiring as few actions as possible
 17 from the user. After eight weeks of fine-tuning, the app entered its beta phase and the founders prepared
 18 to launch it on iOS.

19 257. On October 6, 2010, Instagram launched on iOS. That very day it became the top free
 20 photo-sharing app on Apple's App Store, racking up twenty-five thousand downloads. Instagram's
 21 founders were stunned at the response. As Systrom noted after the launch: "First off, we have to say that
 22 we never expected the overwhelming response that we've seen. We went from literally a handful of users
 23 to the #1 free photography app in a matter of hours."

24 258. By the end of the first week, Instagram had been downloaded 100,000 times, and by mid-
 25 December 2010, its total downloads had reached one million. The timing of the app was impeccable, as
 26 the iPhone 4, with its improved camera, had launched just a few months earlier in June 2010.

1 259. With Instagram on the rise, investors clamored for a stake. In February 2011, Instagram
 2 raised \$7 million in Series A funding from a variety of investors, including Benchmark Capital, which
 3 valued the company at around \$25 million. In March 2011, Jack Dorsey, the CEO of Twitter, pursued the
 4 idea of acquiring Instagram, and Twitter made an offer of approximately \$500 million dollars for the
 5 company. Systrom declined.

6 260. By March 2012, the app’s user base had swelled to 27 million. That April, Instagram was
 7 released on Android phones and was downloaded more than one million times in less than one day. At
 8 the time, the company was also in talks to receive another \$500 million funding round.

9 261. Internally, Facebook carefully tracked Instagram’s meteoric rise, including through the
 10 intelligence it received from Onavo’s data collection. Instagram clearly posed a competitive threat to
 11 Facebook’s dominant position, including in the rapidly expanding market for mobile-based social
 12 applications.

13 262. Unlike Instagram’s streamlined approach to photo sharing, Facebook’s photo-sharing was
 14 onerous. As Facebook internally recognized, mobile devices were changing how users uploaded and
 15 shared photos and it was causing severe problems for Facebook’s business. As an internal Facebook
 16 presentation explained:

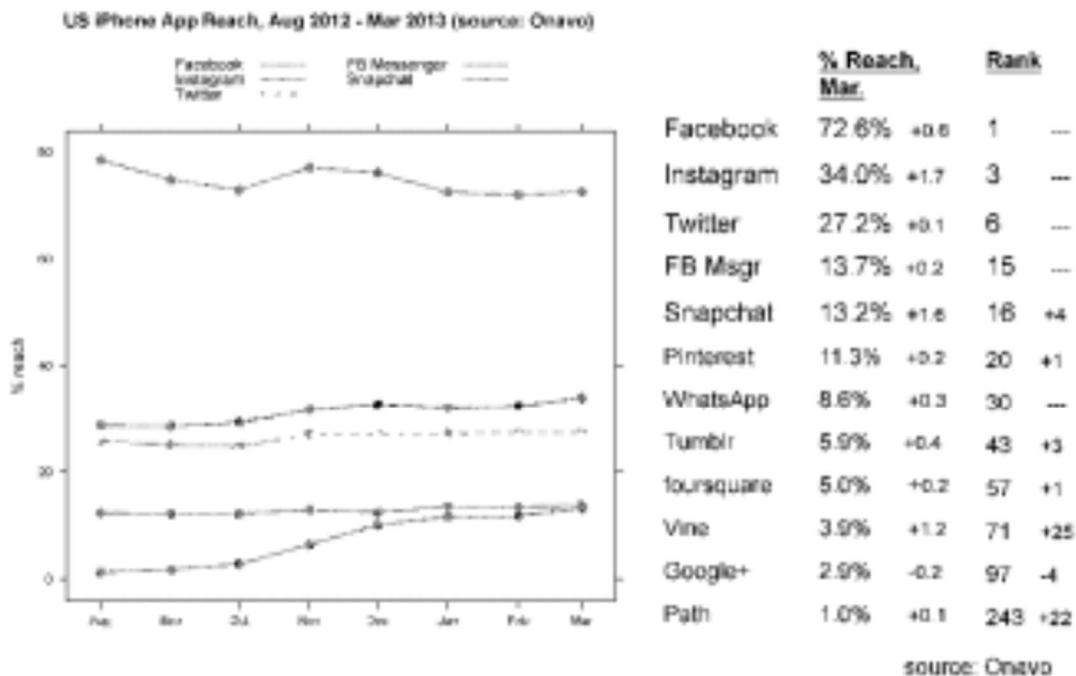
17 Before phones, people would take their digital cameras out for special
 18 events, vacations, etc. Then, they would post a bunch of photos at once—
 19 after uploading them to their computer. With phones, people take and share
 20 more photos more often. They share them individually (rather than waiting
 21 to upload a bunch at once).

22 263. This resulted in a large drop in bulk photo uploads on Facebook’s core social networking
 23 product—a 29% decline from 2012 to 2014. Facebook also observed that text posts were “tanking” 26%
 24 because of “migration to phones with cameras.” The data was clear—Facebook had to shut down the
 25 looming threat from the new photo-sharing app. If Facebook did nothing, Instagram’s user base would
 26 imminently eclipse Facebook’s at its current growth rate, eroding and perhaps even destroying
 27 Facebook’s SDBE. An independent app with no ties or reliance on Facebook, Instagram could become
 28

1 not only a competing mobile-based social app, but a social network unto itself that could rival Facebook
 2 in the amount of engagement and social data it could produce and monetize.

3 264. After direct talks with Mark Zuckerberg, Facebook made Instagram an offer to purchase
 4

5 **US mobile apps (iPhone)**



the company for \$1 billion in April 2012, with the express promise that the company would remain independently managed. Facebook consummated the deal immediately prior to its IPO.

265. Facebook's own Onavo data, which was obtained and published by Buzzfeed, made clear that Instagram posed an existential threat to Facebook. By February 2013, Instagram had grown to 34% of the total user reach among all social apps.

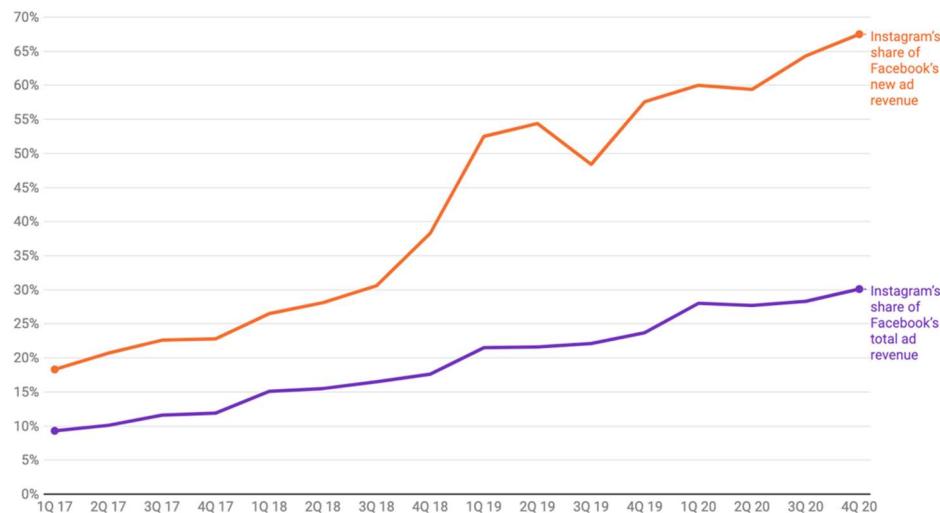
266. With its Instagram acquisition, Facebook's share of mobile photo sharing app users ballooned as Facebook added Instagram's 34% user reach to Facebook's own 72% user reach.

267. Although Instagram had not at the time of the merger meaningfully monetized its user engagement and social data, Facebook quickly did so. By the end of 2013, Facebook had begun showing

1 ads on Instagram. Since then, Instagram has become an ever-increasing proportion of Facebook's
 2 advertising revenue and a large share of Facebook's user growth.

3 268. In 2017, Instagram generated \$2 billion, or about 15 percent, of Facebook's \$13 billion in
 4 ad revenue.

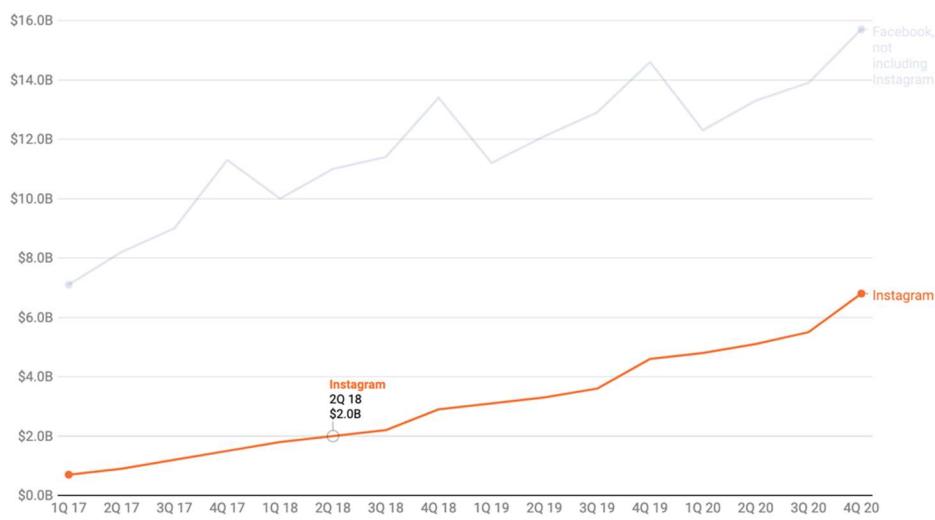
5 Instagram's estimated share of Facebook's ad revenue and growth



14 269. By the end of 2018, Instagram had a billion users and was estimated to generate \$8 billion
 15 to \$9 billion in revenue for Facebook in 2018.

16 270. Instagram also accounts for the bulk of Facebook's new revenue since the acquisition.

18 Facebook and Instagram's estimated quarterly ad revenue



27 Source: Andy Hargreaves, CFA, Equity Research Analyst with KeyBanc Capital Markets

recode

1 271. Instagram allowed Facebook to grow its social network as Facebook’s desktop and core
 2 mobile application began to stagnate. Together, Facebook and Instagram captured and monetized the
 3 social data generated across both apps.

4 272. The Instagram acquisition ensured that Instagram could not become a rival social network
 5 that could generate enough social data to erode the SDBE protecting Facebook’s business. It also ensured
 6 that Instagram could not build and grow its own developer platform, which would threaten Facebook’s
 7 scheme to dominate the Social Advertising Market by denying and/or leveraging social-data dependent
 8 applications’ access to essential APIs. The acquisition accordingly also ensured that Facebook rivals
 9 required to enter into Whitelist and Data Sharing Agreements had no other platform choice—and thus no
 10 option but to hand over their social data to Facebook.

11 273. At the time of its IPO in 2012, Facebook struggled to grow its mobile product, let alone
 12 to meaningfully monetize the social data it collected through advertising. By 2019, Facebook had
 13 achieved an 83% share of the Social Advertising Market by leveraging its Instagram mobile application
 14 and its Facebook mobile and desktop applications. No other company comes close in market share.

15 274. Instagram was instrumental to Facebook’s explosive growth in the Social Advertising
 16 Market. From the fourth quarter of 2010 until the first quarter of 2011, Facebook’s revenue was flat.
 17 From 2011’s holiday cycle to 2012’s opening three months (right before its IPO), Facebook actually
 18 **shrank**. Facebook then experienced a sudden reversal after its acquisition of Instagram, as mobile revenue
 19 began to account for a significant share of revenues, and Instagram allowed Facebook to grow with the
 20 rise of mobile applications.

21 275. Notably, Facebook’s acquisition of Instagram also allowed Facebook to exclude third-
 22 party apps that provided photo and video sharing functionality from its Platform. If an image sharing or
 23 video app contained an important feature, Facebook cloned it, thus paving the way for excluding a
 24 competitive rival from its Platform, while simultaneously taking away that rival’s share of users.

25 276. For example, when Snap, the maker of the app SnapChat, rejected Zuckerberg and
 26 Facebook’s \$3 billion offer to purchase the company and its product, Facebook flagrantly copied key
 27 features from Snap and built it into its Instagram product. Thus, when the SnapChat’s “stories” feature—

1 which allows a user to post a connected series of images and video—rapidly grew in popularity, Instagram
 2 simply cloned it. By late 2016, Instagram had launched a product that mooted one of Snapchat’s most
 3 popular features.

4 277. Facebook’s own clunky mobile app’s clone of the “stories” feature did not have nearly the
 5 same traction with users. It was Instagram that provided Facebook the platform to compete head-on with
 6 a looming threat among social photo- and video-sharing apps. Without Instagram, Facebook would have
 7 faced direct competition. Instead, it leveraged Instagram to obtain and maintain its dominance among
 8 social mobile apps and the lucrative social data they generated.

9 278. Put simply, the acquisition of Instagram dramatically increased Facebook’s market share
 10 of the Social Advertising Market and strengthened the SDBE protecting Facebook’s business.

11 **C. Facebook Acquires WhatsApp**

12 279. In February 2009, Jan Koum and Brian Acton left Yahoo and founded a new company
 13 called WhatsApp. Koum had an idea for a mobile application that displayed user statuses in an address
 14 book on a smartphone—indicating, for example, whether a user was on a call, had low battery, or was at
 15 the gym. The pair enlisted the help of a Russian developer, Igor Solomennikov, to build the app. Koum
 16 spent days writing backend code for the app to allow it to sync with any phone number in the world.

17 280. Although the app—named WhatsApp—was initially unsuccessful, a June 2009
 18 development changed everything. That month, Apple introduced “push notifications” for iPhone,
 19 allowing developers to ping app users even when they weren’t using the app. Koum immediately updated
 20 WhatsApp to ping a user’s entire network of friends when their status changed.

21 281. The feature eventually became a form of instant messaging. Because messages sent
 22 through WhatsApp instantaneously notified other users even if the phone was not running the app in the
 23 foreground, it became ideal for broadcasting messages to connections within a user’s social network,
 24 which was built on their phone’s contact list.

25 282. At the time, WhatsApp’s only significant competition for this sort of instant messaging
 26 was BlackBerry’s BBM—which was exclusive to BlackBerry’s proprietary hardware platform.

1 WhatsApp, on the other hand, tapped into the vast network of app-enabled consumer smartphones that
2 had emerged, particularly Apple's iPhone.

3 283. WhatsApp continued to innovate, including by introducing a double checkmark that
4 showed when a message was read by another user. Wanting more from text messaging, including the
5 limited MMS protocol used by cellular networks, WhatsApp set out to build a multimedia messenger
6 system to send messages across a social network in real time to mobile devices.

7 284. Because WhatsApp's messaging used the mobile phone's Internet connection rather than
8 text messages, the app allowed users to avoid text messaging fees entirely. In some countries, text
9 messages through cellular providers were metered. WhatsApp's ability to send messages to any user with
10 a phone using the Internet was its most sought-after feature.

11 285. In December 2009, WhatsApp updated its app for the iPhone to send photos. User growth
12 spiked, even when WhatsApp charged users for its service. Having created a unique combination of image
13 and messaging apps as one socially powered app, WhatsApp decided to stay a paid service and grew
14 while generating revenue.

15 286. By early 2011, WhatsApp was one of the top twenty paid apps in Apple's U.S. App Store.
16 The company attracted the attention of venture capital firm Sequoia, and WhatsApp agreed to take \$8
17 million of additional funding in addition to its original \$250,000 seed funding.

18 287. Two years later, in February 2013, WhatsApp's user base had ballooned to 200 million
19 active users. That month, WhatsApp raised additional funds—another \$50 million from Sequoia, at a
20 valuation of \$1.5 billion.

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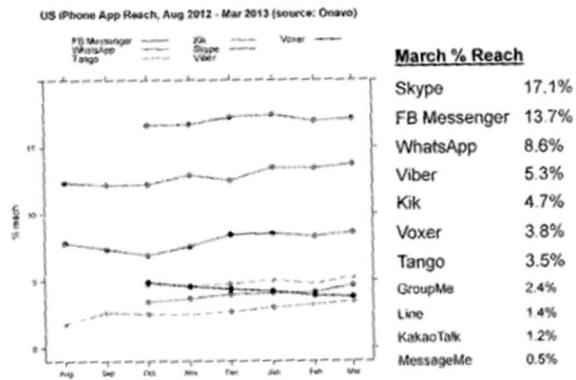
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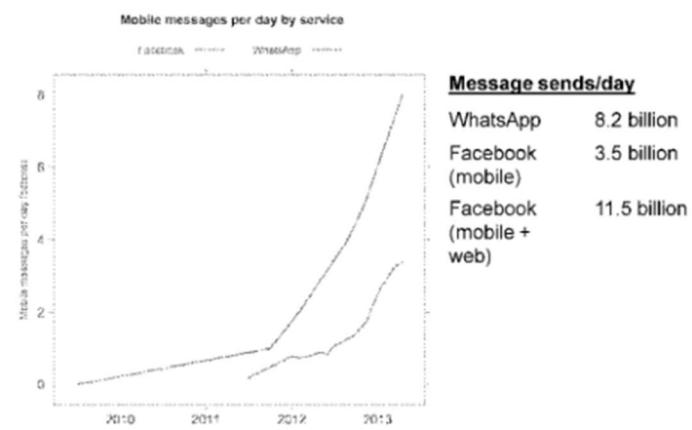
28

1 288. Internally, Facebook had carefully tracked WhatsApp's rapid rise. Engagement data from
 2 Facebook's Onavo spyware reported that WhatsApp was rivaling Facebook's own Messenger product,
 3 and held third place in terms of user reach among mobile messenger apps for iPhone in the U.S as of
 4 April 2013.

5 **US mobile messenger apps (iPhone)**



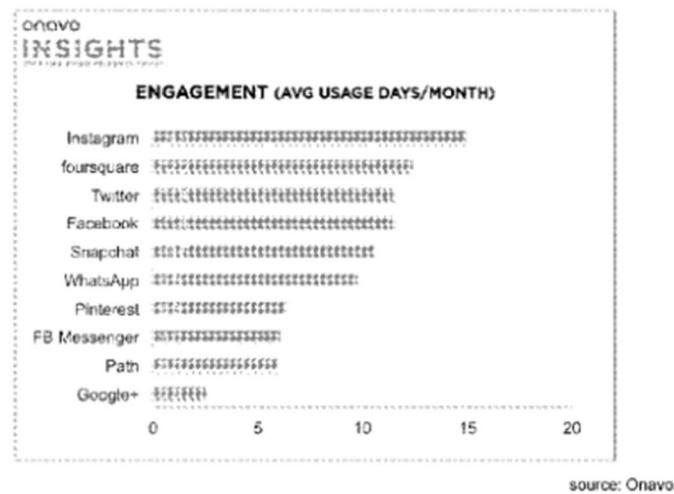
WhatsApp message sends



290. The same Onavo data reported by Buzzfeed showed massive engagement among WhatsApp users, placing it in fifth place behind Facebook's own core product; Facebook's newly acquired Instagram; Twitter; Foursquare; and Snapchat.

291. WhatsApp, although lacking Facebook's market reach, was drawing from the same pool of limited attention. Given Facebook's own fledgling Messenger App, WhatsApp exposed a massive vulnerability in Facebook's business model. WhatsApp was built on a social network derived directly from a smartphone user's contact list. It did not require Facebook's graph network for growth and could not therefore be shut down by revoking access to Facebook's APIs. Nor could Facebook demand that WhatsApp enter into a Whitelist and Data Sharing agreement.

US mobile apps (iPhone only)



292. WhatsApp posed a direct threat to Facebook's business, including the SDBE protecting its dominance. WhatsApp allowed for statuses, image sharing, and texting—all of the principal features of Facebook's core products. By 2013, the size of WhatsApp's network and the user engagement in that network made WhatsApp the most direct threat to Facebook's market dominance—and because of Onavo, Facebook knew it.

293. To ensure that it maintained its SDBE, and thereby its dominance of the Social Advertising Market, Facebook sought to remove WhatsApp as a competitor. As The Wall Street Journal reported, Facebook's Vernal internally commented in 2013: "WhatsApp launching a competing platform is

1 definitely something I'm super-paranoid about." Vernal understood that if WhatsApp created a rival
 2 platform, Facebook's own scheme to exclude rivals by leveraging its Platform would fail—developers
 3 would migrate to the competing platform provided by WhatsApp.

4 294. Knowing about WhatsApp's size, its engagement, and its unique potential to erode the
 5 SDBE protecting Facebook market dominance, Facebook moved aggressively to remove this existential
 6 threat from the competitive landscape. In late 2013, Facebook made an initial bid of \$16 billion in stock
 7 for WhatsApp. During negotiations in early 2014, Facebook raised its price to \$19.6 billion—adding \$3.6
 8 billion to the original price as compensation to WhatsApp employees for staying on board at Facebook.
 9 When all was said and done, Facebook ultimately paid close to \$22 billion for WhatsApp.

10 295. But for the value of containing and shutting down the growth of WhatsApp's competing
 11 social network and platform, the transaction made no possible economic sense to Facebook. WhatsApp's
 12 revenues were a meager \$10.2 million in 2013. Its six-month revenue for the first half of 2014 totaled
 13 \$15.9 million, and the company had incurred a staggering net loss of \$232 million in that same period.
 14 Facebook had paid twenty billion dollars—thousands of times WhatsApp's revenues—to acquire a
 15 money-losing company that created software functionality Facebook itself already had as part of its own
 16 products, and could easily build from scratch for a fraction of the cost of the acquisition if it wanted to.

17 296. At the time of the WhatsApp acquisition, Facebook's user reach and user base and
 18 engagement was already massive—and unrivaled by any competing messaging app—but the addition of
 19 WhatsApp's user base further solidified Facebook's dominance in the Social Advertising Market. More
 20 importantly, however, Facebook had removed a serious threat to its SDBE. If WhatsApp and its nascent
 21 social platform were allowed to compete on the merits, Facebook would not have been able to leverage
 22 its Platform into continued dominance of the Social Advertising Market, including by using API access
 23 to shut down competing third-party apps and to demanding access to other apps' most valuable social
 24 data as a condition for their existence.

25 297. Moreover, because the reach and engagement on WhatsApp generated (and generates)
 26 significant social data that Facebook could (and can) leverage and monetize through its mobile
 27 advertising channel, Facebook's SDBE strengthened as a result of the WhatsApp acquisition, fortifying
 28

1 Facebook's unrivaled dominance in the Social Advertising Market, and strengthening Facebook's ability
 2 to exclude potential entrants to this market from gaining a foothold with a rival messaging or photo-
 3 sharing app.

4 **VIII. THE RELEVANT MARKET**

5 298. Plaintiffs are consumers and purchasers in the relevant market at issue in this case—the
 6 Social Advertising Market. Plaintiffs are direct purchasers of advertising products from Facebook and
 7 were anticompetitively harmed as participants in the Social Advertising Market.

8 **A. The Social Advertising Market**

9 299. The Social Advertising Market is a submarket of online advertising, the latter of which
 10 includes banner ads, search-based ads, and advertising on social networks. Social advertising, however,
 11 is not fungible or interchangeable with these other forms of online advertising. Indeed, social advertising
 12 allows advertisers to granularly target groups of users for ads by their attributes, including by the
 13 attributes of their networks.

14 300. Thus, because of the extensive ability to target advertisements to users on social media
 15 sites like Facebook, search and banner advertising are not reasonable substitutes.

16 301. Several relevant factors indicate that the Social Advertising Market is a distinct submarket
 17 of online advertising and more general advertising markets:

18 302. *Industry or public recognition of the submarket as a separate economic entity.* Social
 19 advertising is broadly considered to be distinct from other forms of advertising by market and industry
 20 participants. For example, the advertising company Outbrain describes the differences between social ads
 21 on its blog as follows:

22 Paid social ads are served via algorithms that define what the user might
 23 be interested in, based on past activity in their social accounts, such as likes,
 24 shares, and comments. Unlike search, which is a focused, goal-oriented
 25 activity, browsing on social is more relaxed. Think cat memes, vacation
 26 snaps, and fun quizzes. Nevertheless, the social platform has accumulated
 27 masses of data about every specific user, which can be leveraged to target
 28 specific audiences with ads that are likely to be of interest to them.

303. Outbrain explains that social ads are considered useful for a distinct purpose:

1 Social ads are best for targeting audience segments who may be interested
 2 in your product or services, based on a range of targeting criteria—location,
 3 age group, gender, hobbies, interests. Social networks, such as Facebook,
 have advanced targeting capabilities, which means you can fine-tune your
 targeting criteria to reach a very specific, high-quality audience.

4 304. Outbrain explains that search ads are different, as they “are great for targeting customers
 5 when they are already looking for you (*i.e.*, they search your company name or product), or if they are
 6 searching for a specific product, service, or piece of information that you can provide.” Outbrain also
 7 distinguishes social advertising from other forms of online advertising, like discovery advertising.

8 305. Moreover, providers of business statistics such as statista.com also provide information as
 9 to social media advertising as a distinct submarket of online and general advertising.

10 306. As another example, in March 2015, leading advertising publication AdAge referred to
 11 Facebook’s Custom Audience targeting, which is unique to social advertising, as “potentially different
 12 and more special because they have this richer level of data.”

13 307. Likewise, industry publication Marketing Land reported in an October 14, 2019 article
 14 that media agency Zenith, which is owned by Publicis Media, predicted growth in the social media
 15 advertising segment as distinguished from search and television advertising, with social media ads
 16 coming in third behind television and paid search advertising.

17 308. Even academic articles, including those published in the *Journal of Advertising*, have
 18 analyzed the market for social media advertising as a distinct segment, with well-defined engagement
 19 characteristics.

20 309. ***The product’s peculiar characteristics and uses.*** Social advertising has a distinct purpose
 21 from other forms of advertising. Social advertising has different applications than other forms of online
 22 advertising. Namely, social advertising allows granular targeting based on user attributes, user interests,
 23 and group attributes. Moreover, because of the detailed amount of information that can be collected about
 24 users as they engage on social media platforms, social advertising can seek out other users with similar
 25 behavioral characteristics.

26 310. Facebook, for example, describes its own targeting capabilities as follows:

1 Facebook ads can be targeted to people by location, age, gender, interests,
 2 demographics, behavior and connections. You can also use more advanced
 3 targeting tools like Lookalike Audiences, which lets you target people
 similar to the people who already engage with your business, or you can
 layer your targeting options to select a more specific audience.

4 311. Facebook allows advertisers to create Lookalike audiences. Thus, unlike search or other
 5 forms of advertising where the ad is created and placed to reach a preexisting audience, Facebook is able
 6 to algorithmically combine a subset of its users to fit an advertisement. This capability is unique to social
 7 advertising.

8 312. As Facebook explains on its website:

9 When you create a Lookalike Audience, you choose a source audience (a
 10 Custom Audience created with information pulled from your pixel, mobile
 11 app, or fans of your page). We identify the common qualities of the people
 in it (for example, demographic information or interests). Then we deliver
 12 your ad to an audience of people who are similar to (or “look like”) them.

13 313. Because of the level of granular data Facebook collects from its users, it can provide
 targeting flexibility like no other advertising medium. As Facebook explains:

14 You can choose the size of a Lookalike Audience during the creation
 15 process. Smaller audiences more closely match your source audience.
 16 Creating a larger audience increases your potential reach, but reduces the
 17 level of similarity between the Lookalike Audience and source audience.
 18 We generally recommend a source audience with between 1,000 to 50,000
 19 people. Source quality matters too. For example, if a source audience is
 made up of your best customers rather than all your customers, that could
 lead to better results.

20 314. Social advertising is also marked by the ability to algorithmically refine advertising
 targeting as users interact with the ads. For example, Facebook allows users to place a pixel on their
 21 website that is pulled off Facebook’s servers when the site is accessed. Facebook is thus able to determine
 22 the efficacy of ads run on Facebook once the user transitions to an advertiser’s own website. Over time,
 23 Facebook’s advertising becomes more targeted and more effective in terms of particular advertising
 24 goals, such as lead generation or online purchases.

1 315. Other social networks, such as Twitter, provide similar targeting abilities. Twitter, for
 2 example, allows targeting based on location, language, device, age, and gender, but also allows for the
 3 targeting of audience types, including algorithmically tailored and custom-created audiences.

4 316. These targeting features, which are available on social advertising platforms, are not
 5 comparably available as part of other forms of online advertising, such as display and banner ads or search
 6 ads.

7 317. ***Unique production facilities.*** Social advertising requires data collected from users on an
 8 inherently social application. A user's search history, for example, will not provide enough data to create
 9 highly targeted advertising features, such as Facebook's Lookalike Audiences. Likewise, passive
 10 advertising, such as banner ads, or even general magazine or publication ads, provides little granular data
 11 that can then be used to further refine the targeting of advertising.

12 318. Providers of social advertising require specialized means of production because they must
 13 rely on data harvested from engagement among networks of users to facilitate highly targeted advertising.
 14 Platforms capable of delivering social advertising must therefore provide functionality such as image and
 15 video sharing, messaging, matchmaking, content sharing, and other inherently social features in order to
 16 obtain the data needed to allow for granular user and user network targeting.

17 319. Because social advertising allows iterative refinement of target audiences, a provider of
 18 social advertising must employ machine-learning or artificial intelligence algorithms that are trained on
 19 data collected from users as they interact and engage with content and advertising. As Facebook's head
 20 of its Applied Machine Learning Group, Joaquin Quiñonero Candela, told *Wired* magazine (emphasis in
 21 original):

22 *Facebook today cannot exist without AI.* Every time you use Facebook or
 23 Instagram or Messenger, you may not realize it, but your experiences are
 24 being powered by AI.

25 320. Other forms of advertising generally do not require sophisticated machine learning or
 26 artificial intelligence. For years prior to the advent of modern machine learning techniques, search
 27 engines such as Yahoo and Google used far less sophisticated algorithms to match user searches with

1 suggested websites and, in turn, advertisements. Traditional advertising, such as magazine or television
 2 ads, require no algorithms at all, let alone artificial intelligence.

3 321. ***Distinct customers.*** Social advertising customers are distinct from search advertisers and
 4 passive display advertisers. Moreover, social advertising is generally more effective at targeted
 5 advertising rather than reaching a massive number of people.

6 322. Customers advertising on search engines are generally seeking priority among the search
 7 results returned given a particular keyword. Customers advertising on social media platforms are
 8 searching for users that fit a particular, predefined profile or set of characteristics. Small businesses that
 9 do not generally have the budget to bid on coveted search results are nonetheless able to bid on granularly
 10 defined audiences on a social media platform like Facebook.

11 323. ***Distinct prices and sensitivity to price changes.*** Social advertising prices are distinct from
 12 other forms of advertising. In search-based advertising, certain search keywords are bid up by many
 13 advertisers seeking to have their ads displayed as part of search results. This means that prices in certain
 14 categories, such as legal or home improvement, will be significantly higher on search-based platforms
 15 than on social advertising platforms like Facebook. For example, legal ads are on average \$1.32 on a
 16 cost-per-click basis on Facebook, whereas they are \$6.75 on a cost-per-click basis on the Google Ads
 17 platform. Likewise, consumer services ads are on average \$3.08 on a cost-per-click basis on Facebook's
 18 platform vs. \$6.40 on Google Ads.

19 324. Because bidding on Google Ads and other search-based advertising is zero sum, meaning
 20 only a certain number of ads can be coupled with a particular set of search keywords, pricing is more
 21 sensitive to changes in demand.

22 325. Social advertising, however, allows granular targeting, avoiding much of the zero-sum
 23 nature of other forms of advertising bidding. Moreover, social advertisers like Facebook can tailor
 24 audiences, reducing the likelihood that advertisers will have to compete for the same display opportunity
 25 at any given point in time.

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1 326. Other general forms of advertising such as television and print are even more zero-sum,
 2 as there are limited time slots or available pages in a newspaper or magazine. Pricing is thus more
 3 sensitive to demand in these forms of advertising.

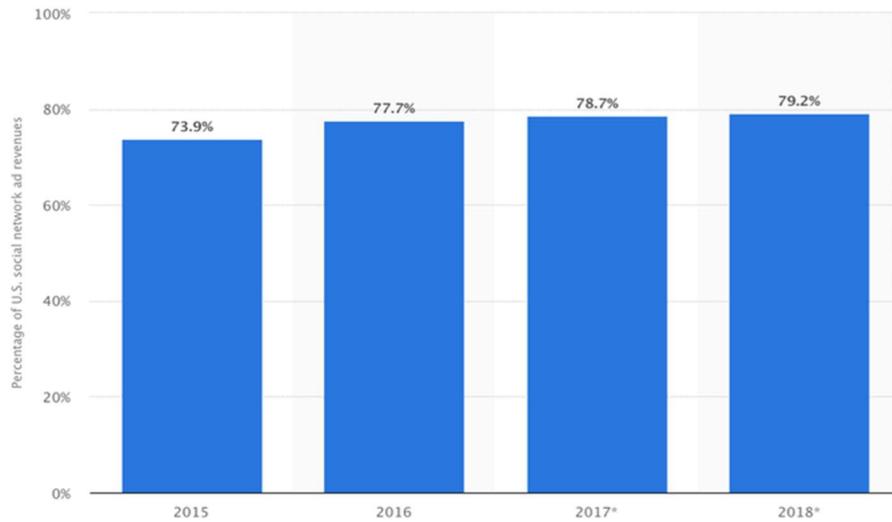
4 327. Social advertising is thus entirely distinct. Because of the ability to target audiences to
 5 advertising, pricing is proportional to the generality of the targeting, not simply to the general demand
 6 for a limited search term, key word, or periodical placement.

7 328. Moreover, Facebook has been able to consistently raise its prices in almost every year it
 8 has sold advertising without facing price pressures from competitors. On a cost per mille (CPM)—or cost
 9 per thousand advertising impressions—basis, Facebook’s advertising prices grew 90 percent year over
 10 year according to a report at the end of 2019. In 2018, Vox reported that CPM prices on Facebook had
 11 increased 122 percent year over year. In 2017, Facebook’s CPMs increased 171%. Facebook raised prices
 12 in prior years as well.

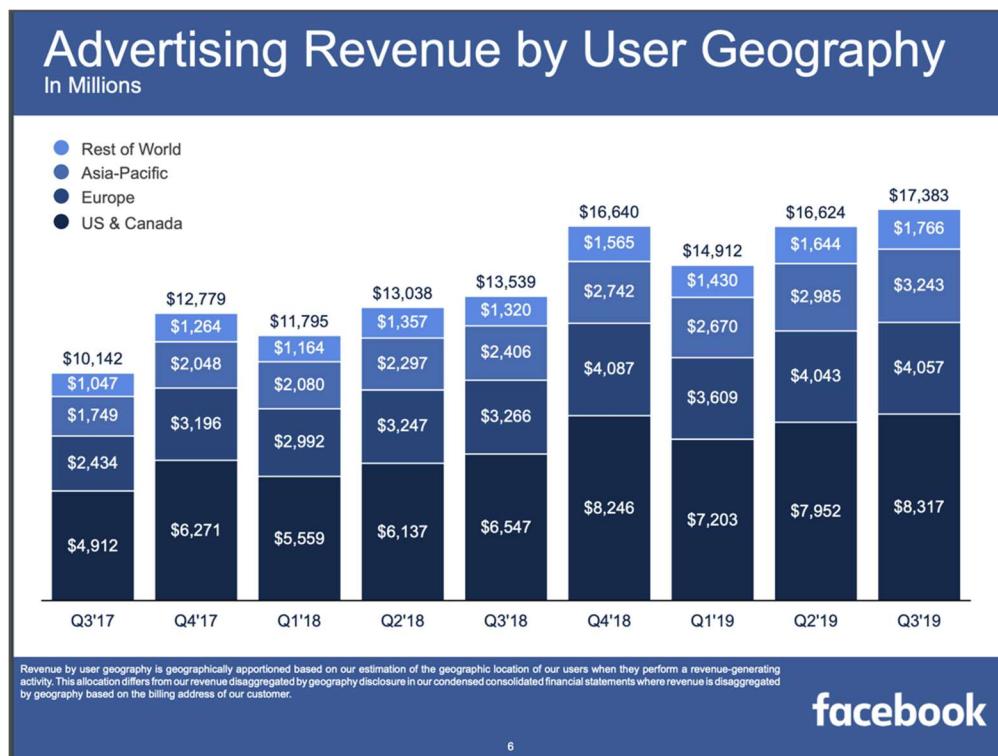
13 329. ***Specialized vendors.*** The Social Advertising Market has its own distinct and specialized
 14 vendors, namely advertising agencies such as Lyfe, Thrive, Volume Nine, Sociallyin, and Firebelly
 15 Marketing, all of which boast a specialization in social media advertising and provide specialized social
 16 media management products. There are many such specialty advertising agencies that specialize in
 17 creating social media advertising campaigns. Moreover, specialized social media analytics vendors also
 18 exist, such as Socialbakers, which provides aggregated analytics across social media platforms. There is
 19 an entire ecosystem of vendors specializing in social advertising—an indicator that the Social Advertising
 20 Market is its own distinct submarket of online advertising, requiring its own unique tools and expertise.

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1 330. Facebook's revenue share of the Social Advertising Market is approximately 80%. Its
 2 share has been above 70% since 2015.



12 331. Facebook's advertising revenue has steadily grown both in the United States and globally.
 13 Facebook reported advertising revenues totaling \$17.383 billion as of Q3 2019. Approximately \$8.3
 14 billion of that advertising revenue came from the United States.



1 332. From 2014 to 2016, Facebook's advertising revenues grew from \$2.9 billion to \$6.436
 2 billion. During that period, and even before then, Facebook was one of the few social networks that
 3 significantly monetized its network by selling advertising. Other competitors did not come close, and
 4 Facebook established unrivaled dominance in the Social Advertising Market and maintains that
 5 dominance to this day.

6 333. Twitter, one of Facebook's only competitors to sell significant social advertising during
 7 the same period Facebook generated revenue in the Social Advertising Market, has never exceeded \$800
 8 million in advertising revenues. Revenues in Q1 2012 were approximately \$45 million, growing to \$432
 9 million in Q4 2014, and standing at \$702 million as of Q3 2019.

10 334. LinkedIn, another competitor that sells social advertising, generated roughly \$2 billion in
 11 overall annual revenue by the end of 2018, with some portion of that coming from advertising.

12 335. Considering the revenue generated by LinkedIn and Twitter, Facebook's advertising
 13 revenue accounts for approximately 86% of the total revenue share across the three largest firms
 14 competing in the Social Advertising Market. Excluding the contributions from minor competitors that
 15 monetize their social networks, the HHI of the Social Advertising Market is approximately 7,685, well
 16 beyond what the DOJ considers a highly concentrated market.

17 **B. Barriers to Entry**

18 336. The Social Advertising Market is protected by the Social Data Barrier to Entry that
 19 prevents Facebook's competitors from entering the market. Without a critical mass of social data, market
 20 participants in the Social Advertising Market cannot generate revenue.

21 337. Moreover, without adequate social data and engagement with the social network, market
 22 participants cannot display content to users that would provide enough value to generate engagement and
 23 additional social data.

24 338. Likewise, without a critical mass of social data, advertising targeting will not be possible
 25 or will be substantially diminished in effectiveness, thus reducing revenues in the advertising sales in the
 26 Social Advertising Market.

1 339. A firm's market power in this market therefore depends on obtaining a critical mass of
 2 social data. Because of network effects, users will not use a social network that lacks enough social data
 3 to provide targeted content or to provide valuable connections to other users. However, once a certain
 4 amount of social data is obtained by a market participant, a feedback loop may form as a result of network
 5 effects, further increasing the amount of social data generated by the social network.

6 340. A new entrant must therefore expend significant amounts of investments in capital,
 7 technology and labor to create a network large enough to create the network effects necessary to compete
 8 with dominant firms in the market.

9 341. Because of the large amount of capital and social data required to successfully enter the
 10 Social Advertising Market, the SDBE effectively excludes entry by a new competitor, even a well-funded
 11 one. Indeed, the SDBE prevented Google from successfully entering the market for social data and the
 12 Social Advertising market with its Google+ social networking product.

13 342. Although Google+ had successfully replicated Facebook's core functionality and even
 14 added additional functionality to its software, its entry failed because it lacked the critical mass of social
 15 data that is required to reverse the network effects protecting Facebook. Without that critical mass, users
 16 will not incur the costs of switching from Facebook's social network to a new entrant's social network.
 17 That is, a new entrant will not be able to provide a valuable network of engaged users upon entry to justify
 18 a Facebook user to change social networks.

19 343. That is precisely what happened to Google. Although it had a massive user base, it lacked
 20 engagement, which meant it did not provide a sufficient amount of social data that could be used to target
 21 content and advertising to users. This, in turn, reduced the value of the entrant social network and
 22 accordingly the attraction of switching from Facebook's social network to Google's.

23 344. The SDBE continues to reinforce Facebook's dominant position. In fact, by excluding
 24 rivals and potentially competing social networks through the anticompetitive scheme described in this
 25 Complaint, Facebook strengthened the SDBE, providing it a larger share of social data and a stronger
 26 monetization channel through social advertising. The additional amount of social data increases the value
 27 of its network, and the revenue from social advertising increases the cost of entry for a new rival.

1 345. Other barriers to entry in the Social Advertising Market include, but are not limited to, the
 2 high cost of development, data management, talent acquisition and retention, server infrastructure,
 3 development infrastructure, software technology, software libraries, and a brand and marketing presence
 4 sufficient enough to attract an engaged user base.

5 **C. Relevant Geographic Market**

6 346. The relevant geographic market is the United States Social Advertising market.

7 347. For the social data that fuels a social advertising product, social data must be compatible
 8 with the customers purchasing that data. Thus, social data about a foreign market may be of little use for
 9 a U.S.-based advertiser. The data may be collected in a different language, may involve interests more
 10 pertinent to a particular geographic region (e.g., American Football vs. Rugby), and may contain a
 11 demographic of users that share a common culture or merely a close proximity.

12 348. The same is true for the Social Advertising Market. An advertiser seeking to sell products
 13 designed for consumption in the United States may not have any use for a platform's advertising targeting
 14 capabilities outside of the United States. In the U.S., Facebook enjoys a higher market share of the Social
 15 Advertising Market than it does worldwide (which is already very high, as described in subsection VI.A).
 16 In short, Facebook enjoys an even more dominant share of the U.S. Social Advertising Market than it
 17 does globally.

18 349. In the U.S., Facebook's market share of the social data generated by users is even greater
 19 than its global market share. Services such as WeChat are geared towards Asian markets, particularly
 20 China, and do not generally compete in the U.S. market with Facebook's Messenger, Instagram, and core
 21 social networking product. Thus, Facebook's U.S.-based market share is even higher than its global
 22 market share referenced above in VI.A, which is already a dominant share of the Social Advertising
 23 Market.

24 **IX. HARM TO COMPETITION AND ANTITRUST INJURY**

25 350. Facebook's anticompetitive scheme had the purpose and effect of monopolizing the
 26 Social Advertising market in the United States. Facebook's conduct allowed it to maintain the monopoly
 27

1 and market power it had obtained by 2010 in the Social Advertising Market, and/or Facebook intended
 2 and attempted to acquire such a monopoly through its anticompetitive scheme.

3 351. Specifically, Facebook engaged in a series of acts in furtherance of its scheme, including,
 4 but not limited to: (a) the removal of important and necessary APIs from its Facebook Platform for the
 5 intended purpose of destroying competition in the Social Advertising Market; (b) the targeting of
 6 competitors for coercive Whitelist and Data Sharing Agreements on pain of denial of access to
 7 Facebook's Platform and APIs; (c) the use of secret surveillance software to identify and destroy potential
 8 competitive threats; (d) the acquisition of rivals with the purpose and effect of strengthening the SDBE
 9 and increasing Facebook's market share and market power in the Social Advertising market; and (f)
 10 misleading developers about the stability of Facebook's Platform to induce them to become dependent
 11 on Facebook's social data.

12 352. Facebook engaged in this conduct while possessing, and/or acting intentionally to obtain,
 13 market power in the Social Advertising Market. Facebook enhanced and/or maintained its market power
 14 and monopoly through this scheme and then used it to exclude rivals and potential entrants from the
 15 Social Advertising Market (both directly and indirectly, by controlling supply and output of social data,
 16 a critical input for social advertising).

17 353. Facebook's anticompetitive scheme also reduced consumer choice by stifling innovation
 18 among nascent and established competitors that relied on Facebook's Platform for their products and
 19 business and by entering into agreements that strengthened the SDBE.

20 354. In the alternative, Facebook's scheme had the purpose and effect of achieving a dangerous
 21 probability of a monopoly in the United States Social Advertising Market.

22 355. Facebook's decision to remove the Friends and News Feed APIs excluded horizontal
 23 and/or direct competitors and rivals from the social data needed to fuel social advertising. Once a potential
 24 threat to Facebook or Facebook's SDBE is eliminated, that entity cannot (a) monetize social data by
 25 selling advertising; (b) accumulate social data sufficient to create a competing platform; and/or (c) even
 26 purchase social data from Facebook at full price.

27

28

1 356. The above decision allowed Facebook to monopolize and/or maintain a monopoly in the
 2 Social Advertising Market. Facebook's scheme allowed it to force chosen Platform developers to buy
 3 large amounts of advertising on its struggling mobile platform, NEKO, in exchange for continued access
 4 to some or all Core APIs. At the same time, Facebook's demand for these developers' social data in
 5 exchange for continued access—including from competing social networks such as Pinterest and
 6 Foursquare—ensured that no rival social advertising platform could emerge, as Facebook would have a
 7 superset of its competitors' users' data. By gaining control over its competitors' social data—a critical
 8 resource for social advertising—Facebook was able to dominate the Social Advertising Market, gaining
 9 a monopoly share and sufficient market power to consistently and dramatically raise prices year after
 10 year.

11 357. Facebook sacrificed short-term profits in the Social Advertising Market for the sole
 12 purpose of executing its scheme and excluding competition. It made no rational business sense for
 13 Facebook to exclude from its Platform the very entities that, if successful, would likely be the most ardent
 14 consumers of Facebook's monetized social data and social advertising. Yet this is exactly what Facebook
 15 did by leveraging API access in a manner that excluded nearly all Platform developers. As Facebook's
 16 own executives and managers admitted in internal communications, Facebook did this strictly for
 17 competitive dominance. Put simply, Facebook put the prospect of long-term dominance ahead of short-
 18 term profit.

19 358. Facebook knew that once its competitors were foreclosed from the Social Advertising
 20 Market by its anticompetitive scheme, Facebook would be free to charge monopoly prices for social data
 21 and social advertising without facing any competitive price or quality pressure. In fact, Facebook has
 22 reduced the value it provides to users through privacy and feature innovation throughout and after it
 23 executed its anticompetitive scheme without sacrificing any significant marginal demand—a clear sign
 24 of its market power in the Social Advertising Market. Likewise, Facebook has increased the price of its
 25 targeted advertising throughout the period of its anticompetitive scheme and to the present, also a sign of
 26 its market power in Social Advertising Market.

1 359. Facebook's Whitelist and Data Sharing agreements ensured that Facebook would control
2 competitive threats to its platform and extract their most valuable asset—their social data. Facebook, by
3 requiring Whitelist and Data Sharing agreements by competitors, ensured that these competitors, some
4 of which were competing social networks, could not become alternative platforms for developers. That
5 meant that when Facebook excluded other developers from the market, they were completely foreclosed
6 and would have no reasonable alternative.

7 360. After excluding applications that competed with it from obtaining social data or from the
8 Social Advertising Market, Facebook was left with competition from entirely independent apps, which
9 did not rely on Facebook's social data, APIs, or advertising. Rather than compete on the merits with these
10 competitors, Facebook secretly spied on users using the Onavo data and the Onavo assets that it acquired,
11 identifying potentially competitive threats and then acquiring the companies that built those threatening
12 products, often at economically irrational prices.

13 361. Facebook used the Onavo data and Onavo-based spyware it owned or had in its possession
14 to track Instagram use. When Instagram's engagement and user reach indicated that it was a potential
15 competitive threat to Facebook, Facebook acquired Instagram and operated it alongside its products, and
16 presently seeks to complete integration of the product with Facebook's other major properties.

17 362. Likewise, Facebook secretly tracked mobile users' use of WhatsApp, and when Facebook
18 determined that WhatsApp threatened to become a platform entirely independent of Facebook's network
19 and social data, it purchased WhatsApp—at an economically irrational price of thousands of times the
20 company's revenue.

21 363. By acquiring potential threats independent of its platform, particularly WhatsApp and
22 Instagram, Facebook ensured that such companies could not be (a) alternative platforms upon which
23 developers excluded by Facebook's API removal could build their apps; (b) alternative sources of social
24 data that could be monetized through Social Advertising; or (c) alternative social networks that would
25 attract users, developers, and advertisers, thereby weakening the SDBE protecting Facebook's business.

1 364. Facebook's past integration of these acquired assets and its continuing effort to integrate
 2 these acquired assets has continuing anticompetitive effects, and threatens to increase and/or maintain
 3 Facebook's dominance in the Social Advertising Market.

4 365. Facebook also used Onavo and the Onavo assets to maintain a real-time view of users'
 5 mobile application use and mobile traffic. Facebook used that real-time information to monitor, punish,
 6 or acquire any competitive threats. Indeed, Facebook used Onavo surveillance data to target threats for
 7 denial of access to crucial APIs; for Whitelist and Data Sharing Agreements; or for targeted removal from
 8 the market through acquisition.

9 366. The net effect of Facebook's scheme was to, *inter alia*, strengthen and maintain the SDBE,
 10 protect its monopoly in the Social Advertising Market, prevent market entry by a potential rival, and
 11 reduce consumer choice.

12 367. Facebook's scheme also ensured that there would be no competition by a rival social
 13 advertising platform on non-price bases, such as, for example, increased privacy, more features, higher
 14 quality features, new features, more valuable social connections, reduced advertising to users, or new use
 15 cases. The scheme also foreclosed new or alternate business models by competitors or potential
 16 competitors, including the business model Facebook itself forwent and sacrificed for anticompetitive
 17 purposes—charging developers and competitors for API / Platform access or advertising.

18 368. Facebook's anticompetitive scheme has also allowed it to raise prices for social
 19 advertising during and after the execution of the scheme. Facebook continues to be one of the only sources
 20 for targeted social advertising in the United States and in most of the world. As evidence of its market
 21 power in the Social Advertising Market, Facebook has raised prices without sacrificing any demand.

22 369. Facebook's anticompetitive scheme excludes developers and would-be competitors from
 23 the Social Advertising market; commandeers and restricts output of social data, a critical resource for
 24 social advertising; and strengthens the SDBE protecting Facebook's business. All of this has resulted in
 25 sustained and increasing supracompetitive prices for Facebook advertisements. Each of the Plaintiffs (and
 26 the persons, entities, and companies in the proposed Classes) bought Facebook advertisements at
 27 supracompetitive prices inflated by Facebook's anticompetitive scheme.

370. Plaintiffs therefore were, and are, harmed in their business and property: they were overcharged for advertising as a result of unlawful, anticompetitive conduct by Facebook.

CONCEALMENT AND TOLLING

371. Until no earlier than November 6, 2019, Plaintiffs did not know, and could not reasonably have known, the truth about Facebook's anticompetitive conduct, including its purpose and intent to engage in anticompetitive conduct and the resulting price inflation, as alleged in this Complaint.

372. As set forth below, Facebook, its executives, officers, and senior employees affirmatively acted to prevent the disclosure of the truth, including through (a) enforcing a strict code of silence within the organization, (b) preventing disclosure to developers and the public during and after the scheme, (c) continuing to evangelize the Core APIs knowing that they were slated for removal for competitive reasons, (d) misleading developers and the public about the reasons for the removal through pretextual explanations, including by falsely stating that the APIs were being removed to provide users more control over their data or out of concern for user privacy, and (e) misleading regulators and the public about acquisitions, including of WhatsApp and Instagram. This conduct individually and taken together ensured that the levee would not break and that developers and advertisers would not pursue claims for fraud or anticompetitive conduct.

373. In fact, the levee did not break for years. It was not until internal documents came to light revealing the true, non-pretextual reasons for Facebook's anticompetitive conduct, including the purported removal of the APIs as well as the lack of legitimate technical or business purpose for the purported removal; the anticompetitive effect and existence of the whitelisting agreements made in exchange for advertising purchases or user data; the capture, clone, or kill strategy implemented by Facebook; and the anticompetitive effects of its acquisitions of WhatsApp and Instagram, including the intended use of these assets, which was hidden from regulators and the public to obtain regulatory approval.

A. Facebook Made False Statements About the Availability of the API Functionality and Omitted from Those Statements that Facebook Had Internally Decided to Remove the APIs

374. During the period from September 2011 through April 2014, Facebook repeatedly told developers and the public that the functionality of the Core APIs as well as other functionality removed in April 2015 was available to them to be used as part of their applications. These false statements, omissions, and half-truths created a duty to speak fully and truthfully. As explained below, Facebook never did so—not even after it removed the Core APIs from its Platform.

375. During training sessions, hackathons, meetups, and conferences, many of which were posted on Facebook’s public YouTube channel, Facebook’s employees and executives evangelized the Core APIs to developers and other viewers. Facebook did so to ensure that developers and the public would not learn of the truth—that Facebook had internally begun the process of auditing apps to be slated for destruction. If the truth were known, developers would have fled the platform, destroying Facebook’s ability to anoint winners in various app categories and to destroy their actual and potential competitors by exploiting their reliance on the platform. For example:

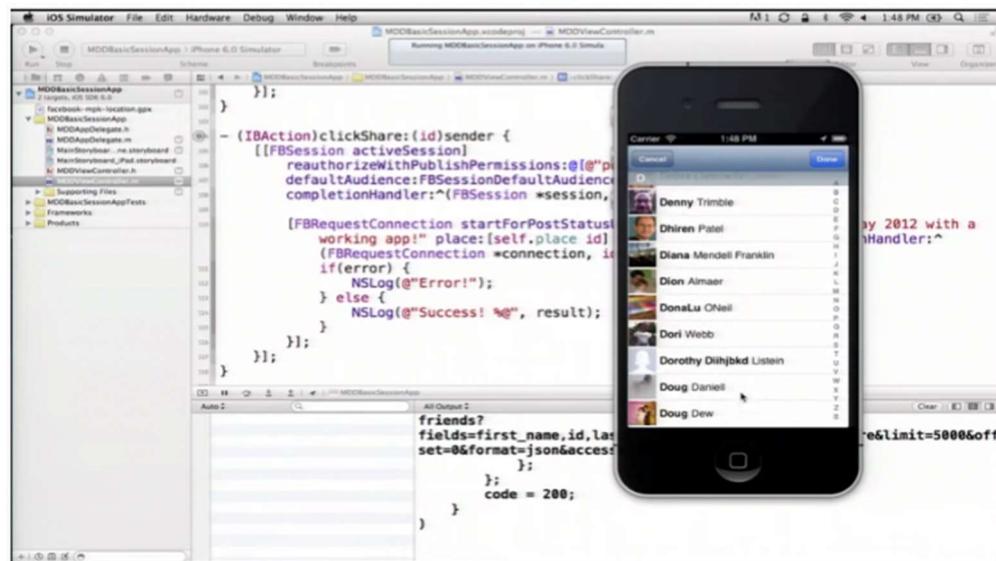
- (a) On June 20, 2012, Cox presented the Ticketmaster app as a case study for what developers could do on Facebook's platform. Specifically, Cox noted that the Ticketmaster app would allow users to see "which night your friends were going to the concert," but the very API this app would have relied on was slated for deprecation with respect to any developer that would not ultimately enter into an agreement with Facebook for data or advertising.
- (b) On October 20, 2013, Zuckerberg gave a speech that touted photo sharing by developer apps and stated that it was an opportunity for developers to monetize their apps. The APIs that were required for such an app, however, had already been restricted as of the date of his statements. During the same speech, Zuckerberg claimed that developers would have access to user photos for their own apps, but at the time he made the statement, Facebook had already planned to remove that functionality from its platform.
- (c) On February 28, 2013, in a developer video published on Facebook's public YouTube channel, entitled "Getting started with Facebook SDK for iOS," Facebook's Product Manager

1 of the Mobile Platform, Eddie O’Neil, taught developers how to build applications that access
 2 a user’s friends’ data by building one with the developers in the audience. He showed how to
 3 make a request to “get back photo albums from five friends” and then towards the end shows
 4 the finished application stated: “Here are all my friends . . . As I scroll here, you see that we
 5 haven’t brought all the friend pictures in yet, but as we bring them in we’ll stick them in that
 6 cache and hold on to them . . . when we come back to display this it’s instantaneous,” meaning
 7 that the app can show all the friends’ photos in a single request to make it very easy for
 8 developers to use this data in their applications. The presentation, including statements about
 9 the demonstrated functionality, was false and misleading, as Facebook had internally already
 10 begun the process of removing the very functionality that was being evangelized.

11 (d) At a developer conference in Moscow, which was posted on Facebook’s developer YouTube
 12 page on February 28, 2013, and entitled “Introduction to the Facebook Platform,” Simon
 13 Cross of Facebook demonstrated the use of several of the APIs, including the Friends and
 14 News Feed APIs that were slated for removal by Facebook at the time of the demonstration
 15 and while the presentation remained on the YouTube developer page. Cross never mentioned
 16 Facebook’s internal plans to remove the very functionality he advertised to developers. If he
 17 had told the truth, developers would have fled the platform and Facebook’s anticompetitive
 18 scheme would have unraveled.

19 (e) At the same February 28, 2013 conference, another Facebook employee, Tom Elliot, demoed
 20 the publishing of information from a mobile app to a user’s timeline as well as to the timeline
 21 of a user’s friends, noting that Facebook’s Graph API allowed posts from a mobile app “on
 22 the timeline of the user and the news feed of the friend of the user—these are people who have
 23 never used your app before.” This is precisely the functionality that would require the Friends
 24 and News Feed APIs, yet Facebook and its employees never once mentioned that they were
 25 internally planning to remove that functionality with respect to certain apps that either (i) did
 26 not provide advertising or data to Facebook in exchange for continued use or (ii) were slated
 27 for destruction after Facebook’s audit of apps on its Platform.

1 (f) At Facebook's Mobile Developer Day in November 2012, Facebook again evangelized the
 2 ability to use the Friends and News Feed APIs as part of mobile applications. Indeed, the
 3 presentation displayed the ability to traverse a user's friends as part of the test app and to post
 4 to a defined audience of friends, as well as to the news feed. The presentation was false and
 5 misleading because the functionality being demonstrated was slated for removal with respect
 6 to most of the apps on Facebook's Platform. Developers who viewed presentations like the
 7 one at the Developer Day conference would be allowed to build their entire business on
 8 functionality that Facebook knew it planned to remove.



18 (g) In a June 26, 2013 video posted on Facebook's public YouTube page for developers,
 19 Facebook touted the work done by one of its partners, Fab.com, which again demonstrated
 20 Friends and News Feed API functionality that was slated for removal. The video features a
 21 Fab.com employee stating that using the Graph API, they were able to "take everything they
 22 have in the catalog and narrowly target to a customer" to "see a product on Facebook and then
 23 share with their friends." Again, Facebook omitted that it was planning to remove the very
 24 APIs that made the featured functionality possible and did so because revelation of the truth
 25 would have prematurely ended its anticompetitive scheme before it could be completed.

1 (h) Facebook was consistently misleading about the functionality available to developers through
 2 the News Feed and Friends APIs. On June 20, 2013, Simon Cross, in a training video
 3 published on Facebook's YouTube Channel, entitled "Getting Started with Graph API,"
 4 presented "[a]n introduction to Facebook's Graph API which is the primary way to
 5 programmatically integrate with Facebook—publishing Open Graph stories, reading data
 6 about the current user—their details, their likes and interests and friends." The video
 7 referenced Facebook's posted developer documentation, and notably featured the following
 8 false and misleading statements about the functionality provided by the Graph APIs, including
 9 the Friends and News Feed APIs:

10 Graph API Explorer make it really easy to get started . . . Placed, Pages,
 11 Photos, Events and News Feed stories as well as Users are all considered
 12 objects in the graph We can go deeper and deeper into the graph. We
 13 can also request the picture connection on each returned User object. This
 14 would allow me to show the profile picture of each of my friends and to
 15 get all of this data in a single request.

16 376. These statements identified above were false and misleading not only because they were
 17 designed to induce developers to build for functionality that was slated for selective removal, but because
 18 the statements maintained the secrecy needed for the anticompetitive scheme's success. Facebook knew
 19 that if developers found out the truth, they would flee the Platform and cease making apps that increased
 20 the value of Facebook. Without the proliferation of apps on its Platform, Facebook could not choose the
 21 "winners" among them for continued access while eliminating any actual or potential competitors when
 22 it eventually removed the APIs.

23 377. These false statements from the end of 2011 through the removal of the APIs in April
 24 2015 created a clear duty to speak fully and truthfully. When Facebook finally announced and purported
 25 to remove the APIs, it breached that duty, preventing developers and the public from learning the true
 26 reasons for the purported removal of the APIs.

B. Facebook and Its Employees Maintained a Code of Silence about the Scheme in the Face of a Duty to Speak

378. Facebook senior executives, including Mark Zuckerberg, acted internally to ensure that the purported removal of the APIs, the reasons for the purported removal, and the overall anticompetitive scheme was kept a secret.

379. For example, when Facebook senior executives began plans to announce Zuckerberg's decision to remove the APIs and to enforce reciprocity, Zuckerberg vetoed the decision in December 2012.

380. When Sukhar raised the need to inform developers of Facebook's internal plans for the APIs—namely, their removal for competitive reasons—Vernal told him that any mention of the competitive reasons for the purported removal would mean a “high likelihood of breaking into jail.” Sukhar did not at any point reveal the truth to developers or the public, even though he internally observed that he had been speaking to dozens of developers “who will get totally fucked by this and it won’t even be for the right reason.” In fact, he acquiesced to the scheme, referring to it as the “switcharoo plan” when speaking to other Facebook engineers.

381. Facebook's George Lee raised the fact that Facebook was continuing to mislead developers about the APIs, even on the eve of the announcement of their purported removal, stating to Purdy and Vernal that "partner managers are still selling products that we ask them to sell, so when it comes to feed integration, we're still telling people to use [Open Graph]." He noted that Facebook had "decided amongst ourselves that this is no longer the future" but that developers were being told something different. Vernal, Purdy, and Lee all knew that Facebook was going to purport to remove the Friends and News Feed APIs, but none of them stopped Facebook from telling developers or the public otherwise. These systematic and knowingly false statements to developers and the public created a duty to speak fully and truthfully, but Facebook never did so.

382. All of this conduct instilled in Facebook's employees a need for secrecy. Even when they raised issues with their superiors, none of them would correct the systematic false statements Facebook was making to developers and the public contemporaneously with their internal execution of the scheme to remove the APIs for competitive reasons, including the internal audit of apps. They failed to correct

1 those statements notwithstanding that their false statements about the Platform and its available
 2 functionality created a duty to speak fully and truthfully. For example, as described fully above, in internal
 3 e-mails to other Facebook executives and employees, Sukhar recounted conversations with developers
 4 during which he did not disclose the truth about the APIs.

5 **C. Facebook Lied to Developers and the Public About the Reasons for the Purported
 6 Removal, Offering False, Misleading, and Pretextual Reasons Instead of the Truth**

7 383. At the April 30, 2014 Facebook F8 developers conference, Facebook misleadingly
 8 downplayed the announcement of its purported removal of the APIs by folding it into its announcement
 9 of new Facebook authentication features, including changes to Facebook's Login system. Zuckerberg
 10 never mentioned during his keynote or any time during the conference that the most central APIs on the
 11 Platform, the Friends and News Feed APIs, were purportedly being removed. Instead, the announcement
 12 was buried at the bottom of a public FAQ released during the conference. The FAQ falsely stated that
 13 "we are removing several rarely used API endpoints; visit our changelog for details."

14 384. This public statement was false because Facebook had internally surveyed the apps relying
 15 on the APIs and found that thousands of them relied on those APIs. They were not in any sense "rarely
 16 used." The false statement was made to avoid drawing attention to Facebook's radical decision to
 17 announce the purported removal of the Friends and News Feed APIs. By making a public false statement
 18 about the reasons for the purported removal of the APIs, Facebook assumed a duty to speak fully and
 19 truthfully on the subject. It did not do so.

20 385. Facebook's public announcement of the purported removal of the Friends and News Feed
 21 APIs was deliberately designed to mislead, as it was announced as part of a broader Facebook Login
 22 announcement that was supposedly intended to increase user control over data. Indeed, in a public blog
 23 post made on the day of the announcement, Facebook's Jeffrey Spehar stated that the changes were made
 24 because "people want more control over sharing their personal information" and because "[w]e've heard
 25 from people that they're often surprised when a friend shared their information with an app."

26 386. Facebook never mentioned that it had internally audited apps to determine whether they
 27 were competitive and that senior executives had internally stated that the decision was being driven by
 28

1 competitive reasons, not legitimate business or technical reasons. Indeed, Facebook never mentioned that
 2 its own engineers thought the removal of the Friends and News Feed API was beyond parody and
 3 “insane.” The statements about user feedback as the reason for the decision were pretextual and
 4 misleading.

5 387. Between the announcement and the removal of the APIs in April 2015, Facebook
 6 continued to make false and misleading statements and omissions to developers and the public about the
 7 purported removal of the APIs, including about the reasons for the purported removal.

8 388. For example, Facebook told developers and others who inquired that the APIs were “going
 9 away.” Indeed, Konstantinos Papamiltiadis told developer Airbiquity on March 30, 2015, precisely this:
 10 “there are certain things that are going away on 4.30 that we can’t provide extensions for,” naming the
 11 Friends and News Feed APIs explicitly in an e-mail to Airbiquity’s product manager. At no time did
 12 Papamiltiadis or anyone else at Facebook tell the full truth—that it was secretly making deals with
 13 countless developers it had hand-selected for continued use in exchange for their social data and other
 14 compensation.

15 389. On March 30, 2015, Papamiltiadis also told Microsoft the same thing: that the APIs were
 16 going away after April 30, 2015. Again, he never mentioned that in fact Facebook had made secret deals
 17 with certain developers.

18 390. These statements indicate that Facebook’s statements were broad and systematic, designed
 19 to mislead developers and the public into thinking that Facebook had evenhandedly applied its policy to
 20 all developers alike. If the truth were known, developers (and other interested parties, including members
 21 of the press) would have not only complained, but pursued the true reasons for Facebook’s purported
 22 withdrawal, which is why Facebook was careful to make false statements to developers and other
 23 interested parties whom Facebook had not selected for continued use.

24 391. Even in a blog post from April 30, 2015, the date the APIs were purportedly removed,
 25 Facebook claimed that “Facebook is migrating all apps to v2.0 of the Graph API with the goal of giving
 26 people more control over the information they share with apps.” That was not, however, the goal of the
 27 purported API withdrawal. Facebook had internally made the decision for competitive reasons and had
 28

1 no legitimate technical or business justification for the decision. Indeed, documents during the several
 2 years Facebook and its senior executives planned and executed the scheme reflect that the APIs were
 3 being purportedly withdrawn for competitive reasons, not for increasing user control over shared
 4 information.

5 392. Facebook continued to mislead developers and the public by offering pretextual reasons
 6 for the purported withdrawal of the APIs. Simon Cross frequented developer message boards, including
 7 the widely-read public message board Stack Overflow, and referred developers and others asking
 8 questions about the APIs to Facebook's public documentation and FAQ. The FAQ stated:

9 Why are you deprecating the permissions to get information about people's
 10 friends?

11 To put people first. This update was in response to feedback from people
 12 who were uncomfortable knowing that a friend could share their
 13 information with an app. With Graph API v.2.0, we wanted to make sure
 14 the people had more control over their information.

15 393. The reasons offered by the public FAQ were false and misleading and omitted material
 16 information. Namely, the FAQ's statement that the purported removal of the APIs was in response to
 17 user feedback was false, and mere pretext designed to mislead developers and the public as to the real
 18 reasons for the purported withdrawal of the APIs. In fact, Facebook had made the decision approximately
 19 three years earlier, as part of Zuckerberg's mandate that a policy of reciprocity be enforced as to
 20 developers and that competitive apps be prevented from using Facebook's APIs. Indeed, Facebook had
 21 used information gleaned from spying on users to measure their engagement with apps, and had
 22 performed an internal audit to determine which apps were competitive or potentially competitive with
 23 Facebook so that they could be marked for destruction. Facebook's internal executives, including Sukhar,
 24 lamented that the purported removal of the APIs was not based on any legitimate technical reason, and
 25 Facebook's own engineers opposed the decision. None of these executives and employees
 26 contemporaneously cited user feedback as even a purported reason for the removal of the APIs.

27 394. Moreover, by speaking partially, falsely, and misleadingly to the public about the reasons
 28 for the purported API withdrawal, Facebook was under a duty to speak fully and truthfully on the subject.

1 It did not do so. Instead, it omitted (a) that the plan to purportedly deprecate the APIs had been made
 2 years prior to the announcement by senior executives, (b) that the reasons for the purported removal were
 3 competitive, not because of user feedback, and (c) that Facebook had hand selected certain apps for
 4 continued use of the APIs. Indeed, Facebook not only omitted that it was broadly entering into extended
 5 API agreements, it made false and misleading statements to the contrary in its public FAQ, including that
 6 “[w]e’ve removed access to friends data in v.2.0” without any mention of the extended API agreements
 7 it was entering with certain app developers.

8 395. The announcement, FAQ, documentation, and posts to developer message boards misled
 9 developers and the public. They accepted the pretextual reasons for the purported API removal after
 10 reading or otherwise consuming Facebook’s communications (including documentation, message board
 11 answers, and videos) posted after the announcement. If they had known the truth, they would have
 12 inquired further into the real reasons for the withdrawal (and so would the press), but Facebook’s false
 13 statements successfully prevented any further inquiry.

14 396. Facebook was careful even when it referenced the purported April 2015 withdrawal of the
 15 Friends and News Feed APIs to continue to offer a false, misleading, and pretextual rationale for the
 16 decision. Indeed, when Facebook announced additional Platform changes on March 26, 2018, senior
 17 executive Ime Archibong referenced the purported API withdrawal and an investigation into apps that
 18 had access to a large amount of information before the purported withdrawal as part of a broader initiative
 19 to prevent “misuse” of user data and to implement “additional measures to protect data” and give “people
 20 more control of their information.” That was not, however, the real reason for the purported withdrawal
 21 of the APIs in April 2015, and Facebook again failed to mention the real reasons for doing so despite
 22 undertaking a duty to speak fully and truthfully, including when it again spoke publicly on the subject in
 23 March 2018.

24 397. Even after certain internal Facebook documents became public after the UK Parliament
 25 used its legal powers to seize them on November 24, 2018, Facebook continued to make false and
 26 misleading statements to conceal from developers, the public, and the press the real reasons for the
 27 purported API withdrawal.

398. In a public blog post by the company posted on December 5, 2018, Facebook stated falsely and misleadingly that extended API agreements to access the purportedly withdrawn APIs were granted to developers in the “short term” and “only used to prevent people from losing access to specific functions as developers updated their apps.” The blog post also stated that the changes to the APIs were made to prevent the improper access to user data that occurred as part of the Cambridge Analytica scandal. That was not, however, the reason Facebook purported to remove the APIs. In fact, Facebook continued to allow broad access to user data for hand-selected apps that entered into agreements with Facebook to provide their social data back to Facebook or provide other compensation, such as large advertising purchases.

399. On November 6, 2019, NBC News posted the full trove of documents seized by the UK Parliament on its website. For the first time, Facebook's statements to developers and the public were revealed to have been false, misleading, or having omitted material information. This was the first time any developer or advertiser—or anyone in the public—could have learned the real reason for the purported withdrawal of the APIs: anticompetitive reasons. It was also the first time developers, advertisers, and the public could learn (1) that Facebook internally viewed the purported withdrawal as lacking any legitimate business or technical justification, and (2) that the scheme had broad impact on competition.

D. Facebook Misled Regulators and the Public About Its Integration of Instagram and WhatsApp with Its Facebook Product

400. At the beginning of this year, Facebook scrambled to integrate the backends of its Facebook products with its acquired products, WhatsApp and Instagram. Until that integration, Facebook had largely maintained the separateness of the products, but in response to threats of divestiture from antitrust regulators, Facebook began an aggressive effort to integrate the backends—the brains of each product—reneging on promises to regulators to keep the products separate and to frustrate any divestiture ordered.

* * *

1 401. When it acquired WhatsApp, Facebook publicly stated that it would operate WhatsApp
 2 independently from its other Facebook properties, but that turned out not to be the case. Indeed, the
 3 European Union found Facebook lied to regulators about its integration plans for WhatsApp and fined
 4 Facebook € 110 million. The EC regulator explained the reasons for its fine in a press release, dated May
 5 17, 2017:

6 The European Commission has fined Facebook €110 million for providing
 7 incorrect or misleading information during the Commission's 2014
 8 investigation under the EU Merger Regulation of Facebook's acquisition
 of WhatsApp . . .

9 When Facebook notified the acquisition of WhatsApp in 2014, it informed
 10 the Commission that it would be unable to establish reliable automated
 11 matching between Facebook's users' accounts and WhatsApp users'
 12 accounts. It stated this both in the notification form and in a reply to a
 13 request for information from the Commission. However, in August 2016,
 14 WhatsApp announced updates to its terms of service and privacy policy,
 15 including the possibility of linking WhatsApp users' phone numbers with
 16 Facebook users' identities.

17 On 20 December 2016, the Commission addressed a Statement of
 18 Objections to Facebook detailing its concerns.

19 The commission has found that, contrary to Facebook's statements in the
 20 2014 merger review process, the technical possibility of automatically
 21 matching Facebook and WhatsApp users' identities already existed in
 22 2014, and that Facebook staff were aware of such a possibility.

23 402. Facebook had lied to regulators. It was always capable of integrating its advertising
 24 targeting systems and in fact had done so. After the acquisition, WhatsApp's founder Brian Acton quit in
 25 protest in March 2018, stating on Twitter: "it is time. #deletefacebook."



26 Brian Acton @brianacton · 20 Mar 2018
 27 It is time. #deletefacebook

28 1.8K 13K 34K

29 403. Consistent with the EC's finding, Acton believed Facebook misled European Union
 30 regulators about its plans to comingle WhatsApp and Facebook data for use in its ad targeting system.
 31 And, despite Zuckerberg's promise that he would not try to monetize WhatsApp for five years, Facebook
 32

1 almost immediately began exploring the monetization of WhatsApp without its founders' consent. Acton
 2 left behind \$850 million in stock when he quit in protest.

3 404. WhatsApp's other co-founder, Jan Koum, left in April of 2018. Instagram's founders
 4 Kevin Systrom and Mike Krieger followed suit shortly after, resigning from Facebook in the Fall of 2018.

5 405. With the founders of its two acquired competitors—Instagram and WhatsApp—gone, by
 6 late 2018 Facebook had unfettered internal license to integrate two of the most powerful rival social
 7 networks with Facebook's core business.

8 406. Facebook, however, knew it was vulnerable to divestiture of the acquired assets if it
 9 continued to operate them independently, and the integration of its assets would give it unprecedented
 10 control over user social data globally.

11 407. Zuckerberg and Facebook immediately devised a plan to integrate backends of the
 12 WhatsApp, Instagram and Facebook products. On March 6, 2019, Zuckerberg announced a plan to
 13 integrate the apps on his blog, pretextually cloaking the maneuver as a privacy-related decision to
 14 frustrate regulators and hide the anticompetitive effects of his integration of the acquired products.
 15 Facebook's announced plan would implement a unitary form of end-to-end encryption across its
 16 messaging and photo sharing apps, and would integrate the acquired assets (WhatsApp, Instagram, and
 17 their respective social data) to make them interoperable with—and inextricable from—Facebook's core
 18 product.

19 408. Although Facebook had prior to the backend integration created interoperability across its
 20 applications of its tracking and surveillance infrastructure, the full integration of the so-called backend
 21 provides Facebook with surveillance, advertising targeting, and market power incomparable from any
 22 other social network (and likely any other private entity) on earth. The integration would ensure that
 23 Instagram and WhatsApp networks can also never become viable platform alternatives to Facebook's
 24 Platform. Indeed, once integrated, Instagram and WhatsApp would not be alternatives but part and parcel
 25 of the very Facebook Graph API and Platform the company has anticompetitively leveraged dominance
 26 in the Social Advertising market to the detriment of thousands of advertisers, including Plaintiffs and
 27 Class Members herein.

409. The back-end integration is a game changer—and directly reneges on Facebook's statements to regulators about its ability to merge the apps together and to consolidate market power. The integration means that 2.6 billion users across Facebook, WhatsApp and Instagram would be interoperably reachable across platforms for the first time, creating a massive and unprecedented concentration of market power in the Social Advertising market.

CLASS ACTION ALLEGATIONS

410. The Classes' claims all derive directly from a course of conduct by Facebook. Facebook has engaged in uniform and standardized conduct toward the class. Facebook did not materially differentiate in its actions or inactions toward members of the class. The objective facts on these subjects are the same for all class members. Within each Claim for Relief asserted by the class, the same legal standards govern. Accordingly, Plaintiffs bring this lawsuit as a class action on their own behalf and on behalf of all other persons similarly situated as members of the proposed class pursuant to Federal Rules of Civil Procedure 23(a) and (b)(3) and/or (b)(2) and/or (c)(4). This action satisfies the numerosity, commonality, typicality, adequacy, predominance, and superiority requirements of those provisions.

The Pre-2018 Nationwide Advertiser Class

411. Between October 1, 2012, and April 3, 2018, Facebook advertisers, including Plaintiffs Affilius, Inc., Jessyca Frederick, Timothy Mills, Mark Young, Danny Collins, Joshua Jeon, 406 Property Services, PLLC, and Mark Berney, were governed by materially common terms of service, which applied generally to both commercial and non-commercial Facebook accounts during this time period.

412. Plaintiffs Affilious, Inc., Jessyca Frederick, Timothy Mills, Mark Young, Danny Collins, Joshua Jeon, 406 Property Services, PLLC, and Mark Berney bring this action and seek to certify and maintain it as a class action under Rules 23(a); (b)(2); and/or (b)(3); and/or (c)(4) of the Federal Rules of Civil Procedure on behalf of themselves and a Pre-2018 Nationwide Advertiser Class defined as follows:

All persons, entities, and/or corporations in the United States who purchased advertising from Facebook between October 1, 2012, and April 3, 2018, but not after April 3, 2018, and were thereby injured by anticompetitive price inflation in the Social Advertising market (the “Pre-2018 Class Period”).

413. Excluded from the Pre-2018 Nationwide Advertiser Class is the Post-2018 Nationwide Advertiser Class, Facebook, its employees, officers, directors, legal representatives, heirs, successors, and wholly or partly owned subsidiaries or affiliates; and the judicial officers and their immediate family members and associated court staff assigned to this case.

The Post-2018 Nationwide Advertiser Class

414. Between April 4, 2018, and the present, Facebook advertisers, including Plaintiffs NJ Premier Inc. and MarQuisha Cork, have been governed by materially common terms of service, which applied specifically to “commercial” Facebook accounts during this time period.

415. Plaintiffs NJ Premier Inc. and MarQuisha Cork bring this action and seek to certify and maintain it as a class action under Rules 23(a); (b)(2); and/or (b)(3); and/or (c)(4) of the Federal Rules of Civil Procedure on behalf of themselves and a Post-2018 Nationwide Advertiser Class defined as follows:

All persons, entities, and/or corporations in the United States who purchased advertising from Facebook between April 4, 2018, and the present, and were thereby injured by anticompetitive price inflation in the Social Advertising market (the “Post-2018 Class Period”).

416. Excluded from the Post-2018 Nationwide Advertiser Class is the Pre-2018 Nationwide Advertiser Class, Facebook, its employees, officers, directors, legal representatives, heirs, successors, and wholly or partly owned subsidiaries or affiliates; and the judicial officers and their immediate family members and associated court staff assigned to this case.

Numerosity and Ascertainability

417. Each class in this action satisfies the requirements of Fed. R. Civ. P. 23(a)(1). Thousands of persons, entities, and/or companies nationwide purchased advertising from Facebook in each of the Pre-2018 and Post-2018 Class Periods. Individual joinder of all Class members is impracticable.

418. The Classes are ascertainable because their members can be readily identified using Facebook accounts, Facebook Ads registrations, and other records and information kept by Facebook or third parties in the usual course of business and within their control. Plaintiffs anticipate providing appropriate notice to the certified Classes, in compliance with Fed. R. Civ. P. 23(c)(1)(2)(A) and/or (B),

1 to be approved by the Court after class certification, or pursuant to court order under Fed. R. Civ. P.
 2 23(d).

3 **Predominance of Common Issues**

4 419. This action satisfies the requirements of Fed. R. Civ. P. 23(a)(2) and 23(b)(3) because
 5 questions of law and fact that have common answers that are the same for each Class predominate over
 6 questions affecting only individual Class members.

7 420. Common issues include, without limitation, the following questions of law and fact for
 8 both the Pre-2018 and Post-2018 Nationwide Advertiser Classes:

- 9 a. Whether Defendant monopolized the Social Advertising Market.
- 10 b. Whether Defendant, its employees or affiliates, intended to monopolize the Social
 Advertising Market.
- 11 c. Whether Defendant attempted to monopolize the Social Advertising Market.
- 12 d. Whether Defendant possessed monopoly or market power in the Social Advertising
 Market.
- 13 e. Whether user data and data obtained by third parties created a Social Data Barrier to
 Entry that protected Facebook's market position and/or monopoly, reduced
 competition or entry in the Social Advertising Market, and/or increased prices for
 products in that market, including, but not limited to, advertising sold to members of
 the proposed Classes.
- 14 f. Whether Defendant's decision to withdraw the Friend and Feed Graph APIs lacked
 any justification and/or whether the procompetitive effects of the decision to do so, if
 any, was outweighed by the anticompetitive effects.
- 15 g. Whether Defendant sacrificed short-term profits to monopolize, or attempt to
 monopolize, the Social Advertising Market.
- 16 h. Whether the procompetitive effects of the decision to withdraw the Friend and Feed
 Graph APIs, if any at all existed, could have been accomplished by less restrictive
 means.

- i. Whether Defendant's agreements with whitelisted developers violated Section 2 of the Sherman Act, including whether the agreements restrained trade or strengthened the Social Data Barrier to Entry.
- j. Whether Defendant's purchase of WhatsApp violated Section 2 of the Sherman Act.
- k. Whether Defendant's conduct harmed competition in the Social Advertising Market.
- l. Whether Defendant's conduct caused price increases or the reduction of consumer or developer choice in the Social Advertising Market.
- m. Whether Defendant's unlawful conduct was a substantial contributing factor in the injury to members of the Classes.

Typicality

421. This action satisfies the requirements of Fed. R. Civ. P. 23(a)(3) because for each proposed Class, the identified Plaintiffs' claims are typical of the claims of other Class members and arise from the same course of conduct by Defendant. The relief each Class's named Plaintiffs seek is typical of the relief sought for the absent Class members.

Adequate Representation

422. Plaintiffs will fairly and adequately represent and protect the interests of the Classes. Plaintiffs have retained counsel with substantial experience in prosecuting antitrust and consumer class actions, including actions involving defective products.

423. Plaintiffs and their counsel are committed to vigorously prosecuting this action on behalf of the Classes and have the financial resources to do so. Neither Plaintiffs nor their counsel have interests adverse to those of the Classes.

Superiority

424. This action satisfies the requirements of Fed. R. Civ. P. 23(b)(2) because Defendant has acted and refused to act on grounds generally applicable to the Classes, thereby making appropriate final injunctive and/or corresponding declaratory relief with respect to the Classes as a whole.

425. This action satisfies the requirements of Fed. R. Civ. P. 23(b)(3) because a class action is superior to other available methods for the fair and efficient adjudication of this controversy. For each

1 proposed Class, the common questions of law and fact regarding Defendant's conduct and responsibility
2 predominate over any question affecting only individual Class members.

3 426. Because the damages suffered by each individual Class member may be relatively smaller
4 than the costs of litigation, the expense and burden of individual litigation would make it very difficult
5 or impossible for individual Class members to redress the wrongs done to each of them individually, such
6 that most or all Class members would have no rational economic interest in individually controlling the
7 prosecution of specific actions, and the burden imposed on the judicial system by individual litigation by
8 even a small fraction of the Class would be enormous, making class adjudication the superior alternative
9 under Fed. R. Civ. P. 23(b)(3)(A) for each of the proposed Classes.

10 427. For each of the proposed Classes, the conduct of this action as a class action presents far
11 fewer management difficulties, far better conserves judicial resources and the parties' resources, and far
12 more effectively protects the rights of each Class member than would piecemeal litigation. Compared to
13 the expense, burdens, inconsistencies, economic infeasibility, and inefficiencies of individualized
14 litigation, the challenges of managing this action as a class action are substantially outweighed by the
15 benefits to the legitimate interests of the parties, the court, and the public of class treatment in this Court,
16 making class adjudication superior to other alternatives, under Fed. R. Civ. P. 23(b)(3)(D).

17 428. Plaintiffs are not aware of any obstacles likely to be encountered in the management of
18 this action that would preclude its maintenance as a class action. Rule 23 provides the Court with authority
19 and flexibility to maximize the efficiencies and benefits of the class mechanism and reduce management
20 challenges. The Court may, on motion of Plaintiffs or on its own determination, certify nationwide,
21 statewide, and/or multistate classes for claims sharing common legal questions; utilize the provisions of
22 Rule 23(c)(4) to certify any particular claims, issues, or common questions of fact or law for class-wide
23 adjudication; certify and adjudicate bellwether class claims; and utilize Rule 23(c)(5) to divide any class
24 into subclasses.

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REALLEGATION AND INCORPORATION BY REFERENCE

429. Plaintiffs reallege and incorporate by reference all the preceding paragraphs and allegations of this Complaint, as though fully set forth in each of the following Claims for Relief asserted on behalf of the Classes.

CLAIMS FOR RELIEF

COUNT I

Section 2 Sherman Act: Monopolization

430. Defendant has willfully acquired and maintained monopoly power in the relevant market for Social Advertising.

431. Facebook possesses monopoly power in the relevant market for Social Advertising. Facebook has the power to control prices or exclude competition in the relevant market.

432. Facebook's revenue share of the Social Advertising Market is approximately 80%; its share has been above 70% since 2015.

433. Defendant has willfully acquired and maintained monopoly power for Facebook in the relevant market for Social Advertising. As alleged herein Defendant has accomplished this by means of predatory, exclusionary, and anticompetitive conduct, including but not limited to: including but not limited to: removing friends, news feed, and other crucial APIs; refusing to sell social data to competing applications developers; extracting social data from competitors through threats of blacklisting and/or through nonconsensual data scraping; targeting competitors for reciprocity or denial of API access; entering into whitelisting and data sharing agreements with competitors, including for large advertising purchases or the provision of user data; and engaging in covert surveillance of competitors' users in order to detect and ultimately acquire competitive threats before they became too formidable.

434. Defendant's conduct alleged above has had an anticompetitive effect in the relevant market for Social Advertising.

435. Defendant's conduct alleged herein has no legitimate business purpose or procompetitive effect.

436. Defendant's conduct has had a substantial effect on interstate commerce.

437. Plaintiffs and the Classes have been and will be injured in their business or property as a result of Defendant's conduct alleged herein.

438. Plaintiffs and the Classes have suffered and will suffer injury of the type that the antitrust laws were intended to prevent. Plaintiffs and the Classes have been and will be injured by the harm to competition as a result of Defendant's conduct.

COUNT II

Section 2 Sherman Act: Attempted Monopolization

439. As alleged herein, Defendant has engaged in predatory, exclusionary, and anticompetitive conduct, including but not limited to: removing friends, news feed, and other crucial APIs; refusing to sell social data to competing applications developers; extracting social data from competitors through threats of blacklisting and/or through nonconsensual data scraping; targeting competitors for reciprocity or denial of API access; entering into whitelisting and data sharing agreements with competitors, including for large advertising purchases or the provision of user data; and engaging in covert surveillance of competitors' users in order to detect and ultimately acquire competitive threats before they became too formidable.

440. Defendant's conduct alleged above has had an anticompetitive effect in the relevant market for Social Advertising.

441. Defendant's conduct alleged herein has no legitimate business purpose or procompetitive effect.

442. Defendant has engaged in that conduct with the specific intent of monopolizing the relevant market for Social Advertising.

443. Defendant has engaged in that conduct with a dangerous probability of monopolizing the relevant market for Social Advertising.

444. Defendant's conduct has had a substantial effect on interstate commerce.

445. Plaintiffs and the Classes have been and will be injured in their business or property as a result of Defendant's conduct alleged herein.

446. Plaintiffs and the Classes have suffered and will suffer injury of the type that the antitrust laws were intended to prevent. Plaintiffs and the Classes have been and will be injured by the harm to competition as a result of Defendant's conduct.

PRAYER FOR RELIEF

WHEREFORE, Plaintiffs request that judgment be entered against Defendant and that the Court grant the following:

- A. Determine that this action may be maintained as a class action pursuant to Rules 23(a), (b)(2), (b)(3) and/or (c)(4) of the Federal Rules of Civil Procedure, and direct that reasonable notice of this action, as provided by Rule 23(c)(2), be given to the Classes, and declare Plaintiffs as the representatives of the Classes;
- B. Enter a judgment against Defendant in favor of Plaintiffs and the Classes;
- C. Award the Classes damages (i.e., three times their damages) in amount to be determined at trial;
- D. Award actual, compensatory, statutory, and consequential damages;
- E. Award equitable monetary relief, including restitution and disgorgement of all ill-gotten gains, and the imposition of a constructive trust upon, or otherwise restricting the proceeds of Defendant’s ill-gotten gains, to ensure an effective remedy;
- F. Grant permanent injunctive relief pursuant to Section 16 of the Clayton Act to remedy the ongoing anticompetitive effects of Defendant’s unlawful conduct;
- G. Award pre-judgment and post-judgment interest at the highest rate allowed by law;
- H. Award Plaintiffs and the Classes their costs of suit, including reasonable attorneys’ fees as provided by law; and
- I. Award such further and additional relief as the case may require and the Court may deem just and proper under the circumstances.

JURY DEMAND

Plaintiffs demand a trial by jury on all claims so triable as a matter of right.

1 Dated: December 18, 2020
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ATTESTATION OF BRIAN J. DUNNE

This document is being filed through the Electronic Case Filing (ECF) system by Brian J. Dunne, who attests that he has obtained concurrence in the filing of this document from each of the attorneys identified on the caption page and in the signature block.

Dated: December 18, 2020

R. H.
R. H. Inc., L.P.

Brian J. Dunne